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# BUTANE-PROPANE

Technology



## News

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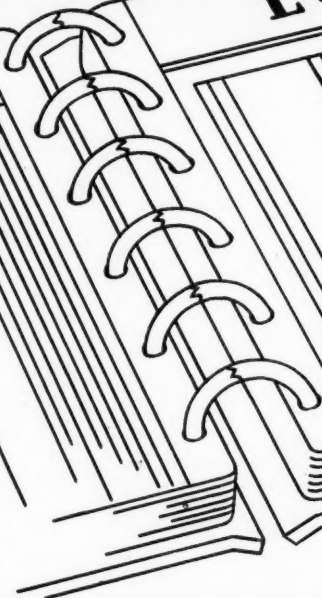
**ANCHOR**  
PETROLEUM COMPANY  
TULSA, OKLAHOMA  
Producers & Marketers

**ANCHORGAS . . .** The dependable Butane-Propane, refined and tested to an exacting standard of uniformity, and backed by an experienced organization with modern manufacturing and transportation facilities.

APRIL, 1944

**PROFIT**

**LOSS**



## HOW HACKNEY DESIGN IMPROVES YOUR BALANCE SHEET

THE extra years of service that your Hackney L-P Gas Cylinders provide, are made possible by Pressed Steel Tank Company's more than 40 years of experience in the manufacture of compressed gas cylinders. As a result of Hackney design, you are assured of ample strength to withstand costly damage . . . light weight with its important economies . . . and uniformity, which is one of the main factors of continued customer approval.

Research, production skill and careful

testing, from raw material to finished product, are your assurance that the advantages of the design are present in your Hackney L-P Gas Cylinders.

Hackney products are contributing the war effort in many ways. As the need for these products becomes less critical as the supply of material becomes more readily available, Pressed Steel Tank Company plans to resume the production of products to meet civilian needs. Write for details.

# Pressed Steel Tank Company

GENERAL OFFICES AND FACTORY • 1487 SOUTH 66th STREET

Milwaukee 14, Wisconsin

**CONTAINERS FOR GASES, LIQUIDS  
AND SOLIDS**



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Boston  
Chicago  
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# L.P.G.

## A Husky Infant

### *Striding Ever Forward*



The LPG Industry was just beginning to cut its eye teeth when World War II arrested growth. War demands may have temporarily halted commercial expansion but they have focused unusual attention upon the convenience and utility of this vital fuel. Now, with greatly increased production facilities available, the LPG industry faces the post-war era a strong united, merchandizing minded body, confident that past accomplishments are but the foundation for future growth.

Here at Pittsburgh Equitable Meter Company we are readying our facilities to serve an increasing circle of LPG distributors with the finest in measurement and control equipment.

We aim to grow with the industry and to that end a moddy portion of our post-war research program is directed.

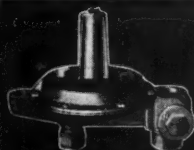
#### PITTSBURGH EQUITABLE METER CO.

**MERCO NORDSTROM VALVE CO.**  
Main Offices, PITTSBURGH, PA.  
Columbia      Houston      Kansas City      Seattle      Los Angeles      Tulsa  
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EMCO Large Capacity  
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Liquid Butane - Propane



NORDSTROM  
Lubricated Plug Valve



# BUTANE-PROPANE

## News

Reg. U. S. Pat. Off.



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# LETTERS

Gentlemen:

In order to increase our gas distribution system, we are considering changing from 550 B.T.U. gas to possibly 1500 B.T.U. gas, which would necessitate changing of the orifice plugs in the various appliances in the city.

We would appreciate very much if you would advise us what manufacturing concerns manufacture jets or orifice plugs for the various types of LP-Gas appliances.

C. S. C.

Texas

We are pleased to give you the name of Anderson and Forrester, 3663 Larimer Street, Denver, Colo., who manufacture orifices, and gas conversion equipment.—Ed.

•

Gentlemen:

Will you please advise us where we might be able to purchase a supply of gas cock lubricant suitable for use with propane?

E.T.H.

New York

In reply to your recent inquiry we are pleased to advise you that you can obtain gas cock lubricant suitable for use with propane from the Merco Nordstrom Valve Co., at 50 Church St., Zone 7, New York City.—Ed.

•

Gentlemen:

My business involves the manufacture of pressure vessels for butane gas, and the wholesale and retail distribution of this gas in several southeastern states. I am seeking your opinion and advice on the behalf of myself and my associates who have a

considerable investment in this type of business. We have been alarmed by the various rumors and differences in opinion as to the future supply of butane and we are seeking the best opinion and knowledge on this subject as a basis for sound postwar planning.

My organization distributes butane primarily for domestic purposes. We have been utilizing a commercial butane since the war and we were using isobutane before the war. There seems to be two problems, the first of which involves the supply during the war. We understand that the new rubber plants are not in full production and that their requirements when in full production may cause a considerable shortage of this gas for other purposes. We also understand that requirements for butane in aviation and as an ingredient in various chemicals may be increased during the war. Our first question, therefore, deals with the probable effects on our current requirements for commercial butane, both as to the supply and transportation.

Our second problem deals with the postwar trend of supply. We understand that the price of butane may increase to the point where it equals or betters that of natural gasoline as its demand in the above mentioned field grows. We also understand that propane gas may become more plentiful for domestic uses which might necessitate our changing to this type of fuel. Such a change would render our present equipment completely obsolete in that butane equipment is built for a 80- to 110-lb. working pressure whereas propane requires equipment

built to withstand 200-lb. working pressure.

We hope that you will be able to give us your opinion on these matters and will be grateful indeed for your advice.

E. R. W.

#### Alabama

It is not possible for anyone to definitely forecast the status of butane after the war, but the statements you make in your letter are believed to be true by the industry at large.

It is expected that demands upon butane will increase during the war months to come to advance the aviation fuel and synthetic rubber programs. Personally, I think there will be an ample supply for domestic purposes after the war. Many in our industry have urged an advance of price for butane at this time for domestic fuel with the thought that it would result in a freer movement of butane to the dealers, but whether or not there will be a substantial increase in price after the war cannot be foretold.

However, rather than to express an individual opinion I am going to refer you to a paper which will be read on April 13 at the annual convention of the Natural Gasoline Association of America at the Baker hotel in Dallas, Texas. It will be entitled "The Future of Liquefied Petroleum Gases." This paper is to be a symposium of opinion as to the supply of these products in (1) balance of the war period; (2) immediate postwar period and (3) three to four years of peacetime developments. Companies contributing include, Carbide & Carbon Chemical Corp., Cities Service Oil Co., Lone Star Gas Co., Phillips Petroleum Co., Shell Oil Co., Inc., Skelly Oil Co., Standard Oil Co. of California and Warren Petroleum Corp.

The findings and prophecies of these companies should be highly authoritative and might very possibly be your best guide for future planning. We expect to publish this paper in an early issue.

There definitely seems to be a trend toward higher pressure containers. Of course, the reason for this is to enable users to purchase propane or butane-propane mixtures if there should be another shortage of butane.—Ed.

Gentlemen:

We wish to thank you for the information contained in your letter of March 8th. It has been very helpful

in view of the fact that the local ODT office had no record of the release you mention regarding the exemption of tank trucks from limitations imposed upon ordinary trucks.

F. S. J.

#### Kansas

The Petroleum Administration for War is doing everything within its power to aid in the transportation of LP-Gases and other petroleum products. We are glad you were able to convince your local office of your need.—Ed.

Gentlemen:

Will you please advise us if there is on the market at the present time a compact unit for use in detecting leaks with soap.

J.C.B.

#### Virginia

We do not know of any specially devised unit that is for sale on the market to be used by service men in detecting gas leaks with soap.

Even in such a large company as the Southern California Gas Co. they provide their men with tin cans, cakes of soap and brushes, with soap suds to be mixed and used as needed. Maybe some of our readers know of a special unit. If so, please let us know.—Ed.

Gentlemen:

If a gas range oven is using natural or manufactured gas how can I determine the orifice size for bottled gas?

D. F.

#### Wisconsin

Chapters 11 and 12 of The Bottled Gas Manual, which appeared in the July and August, 1942, issues of BUTANE-PROPANE News, cover the subjects of "Design and Application of Burners," and "Appliance Conversions." Therein you will find a complete answer to your question. The Bottled Gas Manual will be published soon in book form.—Ed.

- BUTANE-PROPANE News welcomes letters from our readers, but it must be understood that this magazine does not necessarily concur in opinions expressed.—Editor.

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New APRIL—1944



# Postwar Market and Supply

By JAMES W. VAIDEN

President, Natural Gasoline Association of America and Vice President in Charge of Refining, Skelly Oil Co., Tulsa, Oklahoma

**T**HE increase in sales of liquefied petroleum gases has been remarkable since the inception of these products, and has been greatly accelerated by the war. The limiting factors on further immediate increase are transportation shortage, shortage of butane at some points, and use of butanes and butylenes in war plants manufacturing aviation gasoline and synthetic rubber. The prewar butane excess has greatly diminished due to wartime uses, which include using isobutane as alkylation plant charge, normal butane as isomerization feed, butylenes for synthetic rubber and alkylation and butanes as substitutes for butylenes in motor fuel. Present costs of operating synthetic rubber plants for military automobile tires, and alkylation plants for high octane aviation gasoline, seem likely to preclude their operation for postwar automobile tires and motor fuel. There is no shortage of propane supply at present or contemplated for the postwar period.

Liquefied petroleum gases have a wide range of possible utilization, and new and possibly important uses will be developed through research and practical application. As in any business there is a good chance that the overall picture may change as time goes on, and the relative importance of the various uses may greatly affect their position in the industry. To review the progress of this research and development is beyond the scope of this article.

Liquefied petroleum gases present a profitable market to those companies which apply sound engineering and sound economics to their manufacturing and marketing policies. There is little doubt in the minds of most of us charged with the management of natural gasoline plants and refineries that 95% to 100% extraction of butanes and 60% plus of propane will be economic in postwar operation, and will be necessary to meet the demand for these products. A retail marketer having a firm supply agreement with a reputable distributor should have little fear as to supply of liquefied petroleum gas products for postwar operation.



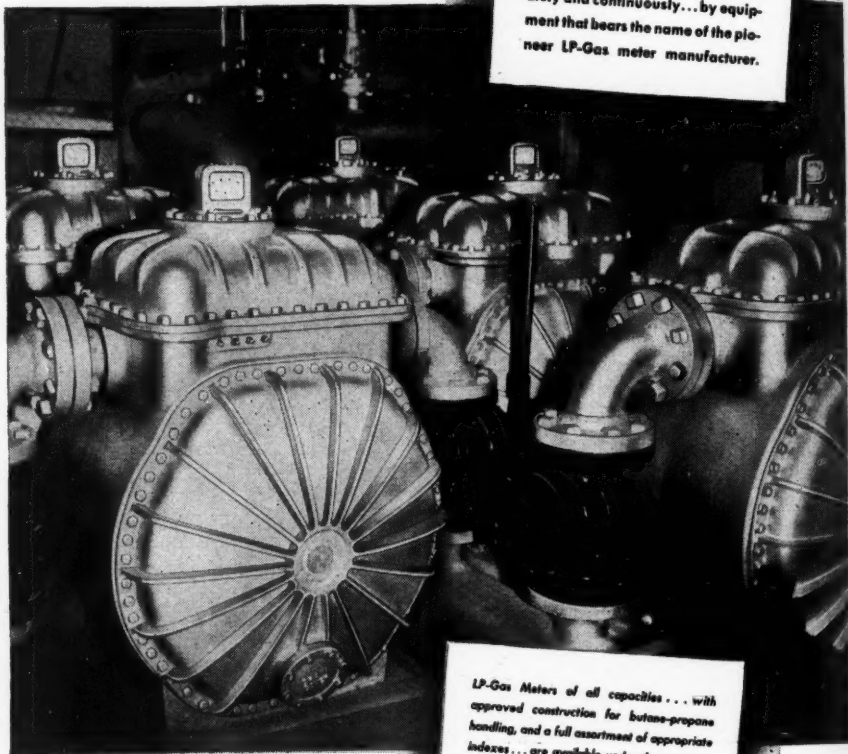
**JAMES W. VAIDEN**  
**Guest Editor for April**

**APRIL—1944**



# A Battery Goes into Action at Camp Haan

In the propane plant at Camp Haan, in California, this battery of METRIC-AMERICAN Ironcase 500-B's is helping Uncle Sam keep both gas supply and accounts straight. • Each of these five busy meters (LP-Gas type) is handling better than its conservatively rated 10,540 cu. ft. per hr. capacity of propane, measured at 15 lbs. gage. The plant's propane delivery thus is measured accurately and continuously... by equipment that bears the name of the pioneer LP-Gas meter manufacturer.



LP-Gas Meters of all capacities... with approved construction for butane-propane handling, and a full assortment of appropriate indexes... are available under the AMERICAN and METRIC-AMERICAN brands. Helpful CATALOG LPO-4 mailed you at your request.

## AMERICAN METER COMPANY

INCORPORATED, (ESTABLISHED 1836)

GENERAL OFFICES • 60 EAST 42ND STREET, NEW YORK 17

1749

# MAINLY BEYOND THE MAINS

By ELLIOTT TAYLOR, Washington Editor

## Regulation Again

There is quite a flare-up down Alabama way over the question of whether or not the Alabama Public Service Commission has jurisdiction over butane operators in that state, the commission having ordered one operator to show why he had not obtained a permit from the commission to operate in Alabama. The commission is reported to have announced its intention of assuming jurisdiction over other butane gas companies "who operate as public utilities in Alabama."



ELLIOTT TAYLOR

If the press releases are to be believed, the commission has already judged butane companies operating in Alabama "to be public utilities similar to other gas and electric companies." If this is the case, there seems little sense in the body even tak-

ing the case under advisement, since its decision has already been reached. We are informed that the entire butane industry of the state is aroused and that if the commission rules against the LP-Gas firm it will be taken into the courts on appeal.

It is not within the limited range of our talents to brief the legal steps that should be taken by the industry in thus resisting an ill advised encroachment on its activities, but we believe that the legal battle, if one ensues, should be fought with vigor and on a united front of LP-Gas interests. There have been abortive attempts in the past to put the industry under utility regulation, but to the best of our knowledge all have failed to date.

Our frank opinion is that any state commission that wants to undertake the complete regulation of the LP-Gas industry is either ignorant of what it is getting itself into, or is a glut-ton for punishment. It is understandable that on an otherwise dull and quiet day a commission might eye one or two big suc-

cessful operations, serving a compact and unified area, and decide that regulating such a firm would be a simple routine matter—nothing to it.

But we suggest that before any hasty decisions are made, all of the commissioners take a trip around over the state of Alabama, or any state, and see how butane or propane is served. As against the few unified compact operations they will see hundreds of small dealers selling LP-Gas on a tank truck delivery basis, to customers, some of whom own their equipment, and some of whom are served by equipment owned by dealers. They will find small operators who handle bottled gas as a sideline and who aren't finding it a very profitable sideline at the present time, either. They will find dealers who operate on a cash-and-carry basis, under no obligation to do anything but hand the customer a cylinder of gas if he lugs in an empty and lays cash on the line for a refill. They will find areas in which two or three or maybe more operators are competing in the same territory, without enough combined business in sight in the locality to make it even profitable for one to carry on.

They will find that having

prescribed certain regulations for public utilities they must put them into effect for every one of these small operations or face the legal complications of perpetrating a discrimination. Certificates of public convenience and necessity will have to be issued to every operator, regardless of his size, if he is to be permitted to stay in business. To do this their territories will have to be investigated, one by one, to ascertain whether or not there is need for the service rendered. Every operator will have to be covered, and we anticipate a host of knotty questions when it comes to deciding who is to get the franchise in disputed competitive areas.

Having finally settled all of the questions of issuing permits to do business, and having allocated the areas of the state into separate franchises, the commission can then proceed to put its other public utility regulations into effect; regulations that will have to affect the LP-Gas part-time department of some backwoods general store or small town plumbing establishment, as well as the biggest operator.

It will first of all have to set rates for residential, commercial and industrial use—rates based

on an analysis of the accounting exhibits of hundreds of individual small-time business enterprises. For any attempt to regulate the price at which one sells fuel on the basis of the schedules allowed another would of course be subject to immediate invalidation by the courts.

Under the Alabama law the commission has the right also to establish standards of service, require extensions of service in franchise areas, allocate unincorporated territory among utilities and order interconnections of gas systems. How the commission will be able to order an interconnection of two LP-Gas delivery routes is not presently clear, but if they do it for one regulated utility in the state they must be prepared to do it for all. They will then be ready to exercise all of the prescriptions that have been handed down for other gas utilities, requiring: A uniform system of accounting; general regulations as to the preservation of records; continuing property records; lists of units of property to be used in accounts; method of computing depreciation; maximum and minimum depreciation and reserve requirements; advance submission of budgets and an annual report form.

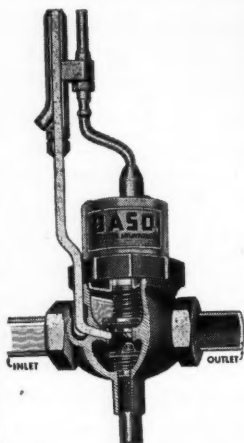
We are of the opinion that no

sane board of utility commissioners wants to let itself in for anything even approximating the confusion that such detailed regulation of a multitude of small business enterprises would entail. Every commissioner must recognize that the jurisdiction within which the commission operates in properly safeguarding the public interests entails all of the obligations as well as the rights that the commission would undertake to invoke. We believe that they should consider well whether the extension of jurisdiction that they now seek would not result in an impairment rather than an improvement in the service to the public whose welfare and convenience they represent.

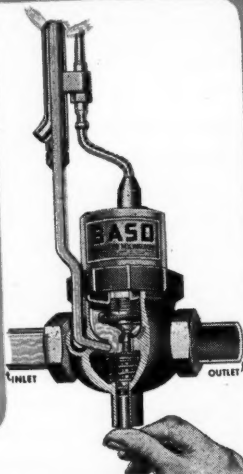
Unless the members of the Alabama Public Service Commission are imbued with a spirit of martyrdom that borders on the fanatical in a cause whose ultimate end can serve no public good, we believe that they will be well advised to forget the whole matter as rapidly as dignity will permit.

In the meantime, the LP-Gas industry, itself, can well afford to give more consideration to what it can do from within to make regulation in any state a less formidable threat than it now appears to be in Alabama.

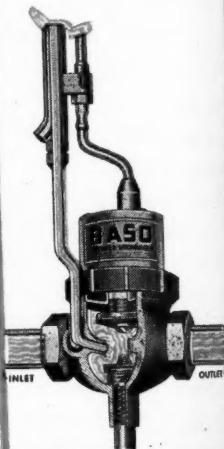
# BASO Thermo-Electric AUTOMATIC PILOT



**1** In case of pilot flame failure, all gas flow is shut off to pilot burner as well as to main burner.



**2** Baso 100% Flow Interruption provides safe starting of appliance. Gas flows only to pilot burner during pilot lighting.



**3** Baso permits gas to flow to main burner only after: (a) pilot is lit, (b) magnet holds valve open, (c) reset button has been released.

## 100%

## FLOW INTERRUPTION

### assures SAFE LIGHTING of Appliances

● When pilot flame fails, Baso instantly and positively *shuts off all gas flow* to pilot burner and main burner.

Appliance is put into operation by manually resetting the Baso and re-lighting pilot burner. All danger of burns from premature ignition of main burner is *prevented* by Baso 100% Flow Interruption.

This *exclusive* Baso design feature suspends all flow of gas to main burner... gas goes only to pilot burner. Only *after* reset button is released can gas again flow to main burner.

Baso valve models for any fuel gases. Custom-built Basos and switch type models for control of electric main burner valves are also available.

A.G.A. & U.L. APPROVED—Patented.

**MILWAUKEE GAS SPECIALTY CO.**  
MILWAUKEE 3, WISCONSIN



# Who's Afraid of the REA?

By CARROLL WILLIS

President, Homegas, Wichita, Kansas

WHEN the Rural Electrification Administration first began expanding in this section of Kansas, many of our dealers were afraid that the days of "Homegas" (butane) were numbered.

A careful study was made to learn the best way to present a cost comparison of the two that any farmer could understand and would believe.

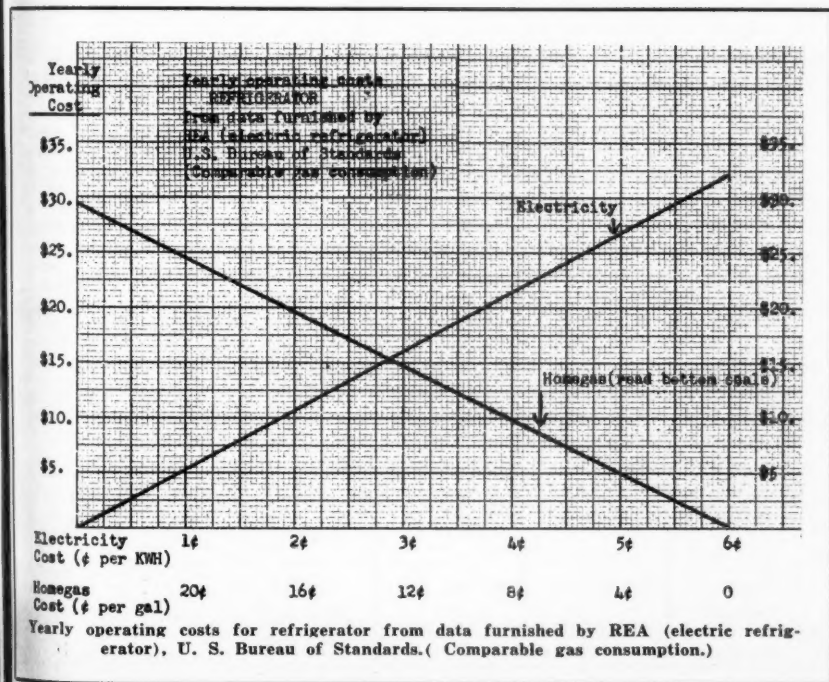
Fortunately, two U. S. Govern-

ment agencies clearly pointed out the economical way to cooking, refrigeration and water heating.

The REA rate calculator card (16-6922) gives the following electric usage figures:

Cooking—140 KWH mo.....1,680 KWH yr.  
Refrigerator—45 KWH mo.... 540 KWH yr.  
Water Heater—240 KWH mo...2,880 KWH yr.

While it was realized that these figures could vary widely in different homes, it was felt advisable to



use them exactly as quoted by REA.

The U. S. Bureau of Standards (circular C420, page 15) gives an exact comparison with gas:

"The cost of bottled gas and electricity will be equal for cooking if the price of fuel per pound is  $3\frac{1}{2}$  times the cost of electricity per kilowatt-hour. Water heating will cost

about the same if the price of a pound of propane is about  $4\frac{1}{2}$  times the cost of that of a kilowatt-hour; but for equal cost for refrigeration the two prices must be approximately equal."

Since "Homegas" is sold by the gallon, weighting  $4\frac{1}{2}$  pounds, the above statement can be expressed:

### GAS-ELECTRIC COMPARISON CHART

Service	Electricity Used (REA)	Gas (Bureau of Standards)	
		Butane	Propane
Cooking	1,680 KWH	110 Gals.	$4\frac{7}{10}$ Cyl.
Refrigerator	540 KWH	122 Gals.	$5\frac{1}{10}$ Cyl.
Water Heater	2,880 KWH	144 Gals.	$6\frac{1}{10}$ Cyl.
Brooder Heating 800 Chicks	400 KWH	24 Gals	$1\frac{1}{10}$ Cyl.

Fig. 1.  
HOW TO  
FIGURE  
COST

Electric — Almost every home will use its minimum for lights, iron, radio, washer and water system, as shown on REA rate card. If only refrigerator is used, cost is 5c KWH. If refrigerator, range and brooder are used, cost is 3c KWH.

Gas—Get local price of butane per gallon (usually 8c or 10c), or bottled gas per cylinder (usually \$6 or \$6).

### YEARLY OPERATING COST COMPARISON

Service	Electricity	Butane	Propane
Refrigerator Only	540 KW @ 5c <b>\$27.00</b>	122 Gals. @ 8c <b>\$9.76</b>	$5\frac{1}{10}$ Cyls. @ \$5 <b>\$27.00</b>
Range Only	1680 KW @ $3\frac{1}{2}$ c <b>\$58.80</b>	110 Gals. @ 8c <b>\$8.80</b>	$4\frac{7}{10}$ Cyls. @ \$5 <b>\$24.00</b>
Refrigerator and Range	2220 KW @ $3\frac{1}{2}$ c <b>\$77.70</b>	232 Gals. @ 8c <b>\$18.56</b>	$10\frac{7}{10}$ Cyls. @ \$5 <b>\$51.00</b>
Refrigerator Range Water Heat. Brooder	5500 KW @ 3c <b>\$165</b>	400 Gals. @ 8c <b>\$32</b>	$17\frac{7}{10}$ Cyls. @ \$5 <b>\$88.50</b>

The cost of "Homegas" and electricity for cooking will be equal if the price of fuel per gallon is 15 times the cost of electricity per kilowatt-hour ( $3\frac{1}{2}$  times  $4\frac{1}{2}$  lbs. equals  $15\frac{3}{4}$ ).

Water heating will cost the same, if the price of fuel per gallon is 20 times that of a kilowatt-hour ( $4\frac{1}{2}$  times  $4\frac{1}{2}$  lbs. equals  $20\frac{1}{4}$ ). For equal costs for refrigeration, the price for fuel per gallon should be approximately  $4\frac{1}{2}$  times that of a kilowatt hour.

This data from the Bureau of Standards and REA's rate card was then compiled on a convenient, pocket-sized card (Fig. 1).

Comparative yearly operating costs between "Homegas" and electricity for water heating alone were later added. They show:

Water Heater Only		
2220 KW @ 3c	144 gals. @ 8c	
\$86.40	\$11.52	

Figs. 2 and 3 are reproductions on the backs of penny U. S. postcards that are sent out to prospective customers to emphasize the economy of liquefied petroleum gas over electricity. They have been very successful in developing new business.

Since electricity is sold on a "step-down" rate, a comparison in cost must be based on the actual brackets prevailing in any locality. It is assumed that almost every home will use their minimum for lights, iron, radio, washer, and water system, as shown on the REA rate card.

REA rates prevailing locally are such that if only a refrigerator is used, cost is 5c KWH. If refrigerator and range is used, cost is  $3\frac{1}{2}$ c KWH, and if water heater is also added, cost drops to 3c KWH.

These Government usage figures may be too low on farms where the

## TWO U.S. GOVERNMENT AGENCIES

*Point the way to economical Cooking on the farm.*

**REA**

The Government's rate card, REA gives the cost of cooking by electricity at 140 KWH monthly or 1,680 per year. At  $3\frac{1}{2}$ c per kilowatt, this is . . . . .

**\$5880**

**U. S.**

Bureau of Standards

The U. S. Bureau of Standards states that this same amount of cooking can be done with 5 cylinders of bottled gas (costing \$25 to \$30) or 110 gallons of butane costing only \$8.80 to . . . . .

**\$1100**

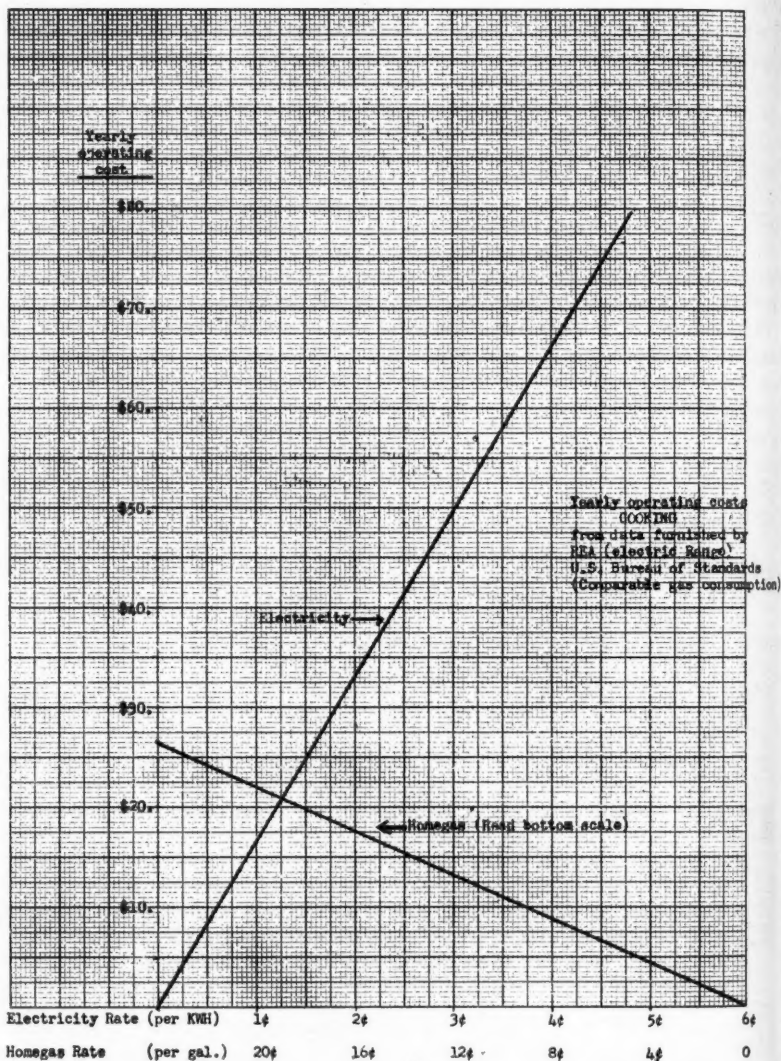
### IMPORTANT

Since butane-propane gas is 3 times as hot as natural gas it is important that the oven bottom be of solid cast iron weighing at least 15 pounds to insure longest life from your purchase.

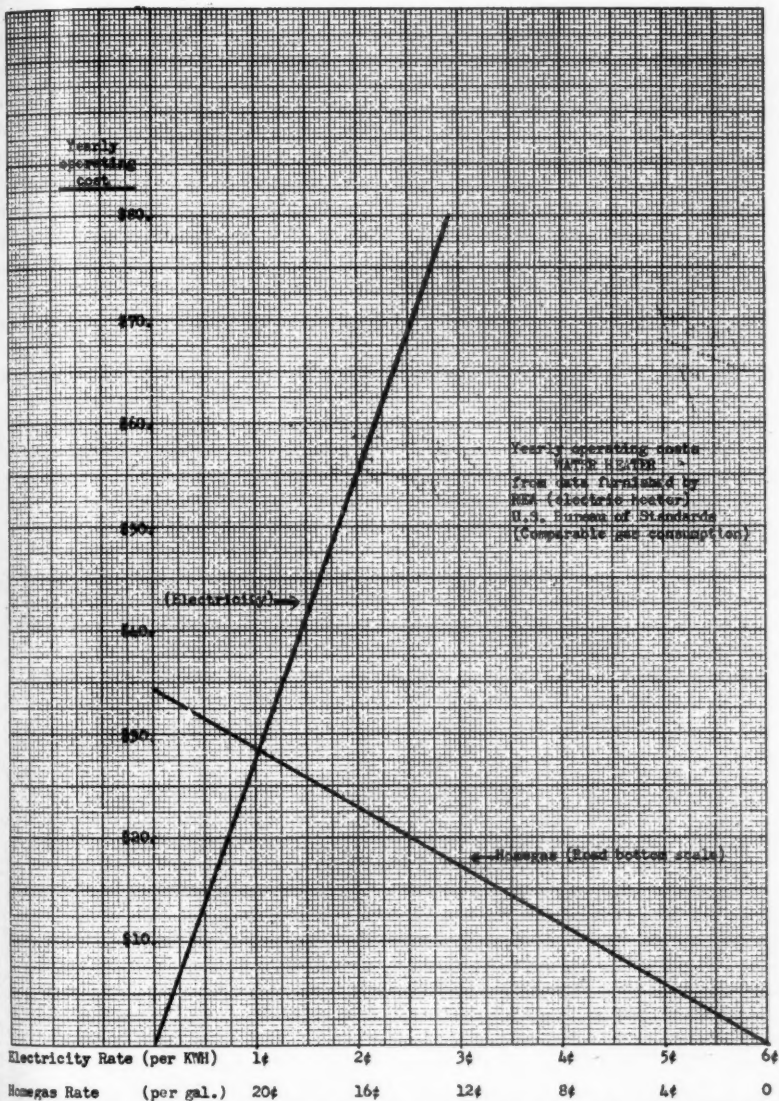
DE-4

**Gas COOKING \$4780**  
SAVES YOU . . .  
**YEARLY**

Fig. 2. Anyone receiving this postcard from "Homegas" would think twice before installing electricity for cooking.



Yearly operating costs for cooking, from data furnished by REA (electric range), U. S. Bureau of Standards. (Comparable gas consumption.)



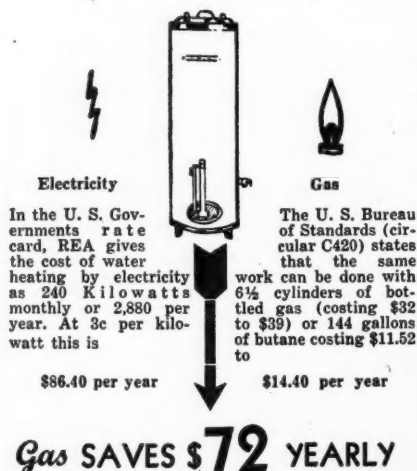


appliances are used more than average. This applies to both the electric and the figures for corresponding use of gas. The comparison of the cost between electricity and gas would remain the same, however.

The same comparative data from

## U. S. GOVERNMENT

*Points the way to economical water heating on the farm!*



IMPORTANT! Be sure that your gas water heater is equipped with 100% Shut-off pilot and is thoroughly insulated. RE 12

Fig. 3. A penny postcard carries the above vivid comparison to prospects for "Homegas."

REA and U. S. Bureau of Standards are the bases for the interesting cost comparison graphs accompanying this article.

Knowing the prevailing electric rate, (1) the price at which "Homegas" could be sold and still remain competitive can be easily determined or (2) the amount of yearly saving of "Homegas" (at various rates) over electricity (at various rates) can be quickly computed.

Again, it should be emphasized that the usage of either fuel will vary widely in different homes. However, it was felt advisable to use the Government's (REA) estimate.

## Georgia Dealers Elect Officers

At a meeting of the Georgia Dealers' Association, held in Macon, Ga., Feb. 14, Hermann Paris was



HERMANN PARIS

elected to the presidency for the ensuing year. Mr. Paris is president of the Georgia Butane Gas Co., of Sandersville.

Others elected are Price Aycock, Automatic Gas Co., Columbus, vice president, and W. D. White, of Albany, secretary-treasurer.

Special addresses were made to the members by K. A. Coates, of Green's Fuel, Inc., Sarasota, Fla., and Dean Chivington, of Savannah, representing the War Production Board.

# 400 Loaves Every 35 Minutes Baked by Army Propane Oven

By C. F. DEXHEIMER

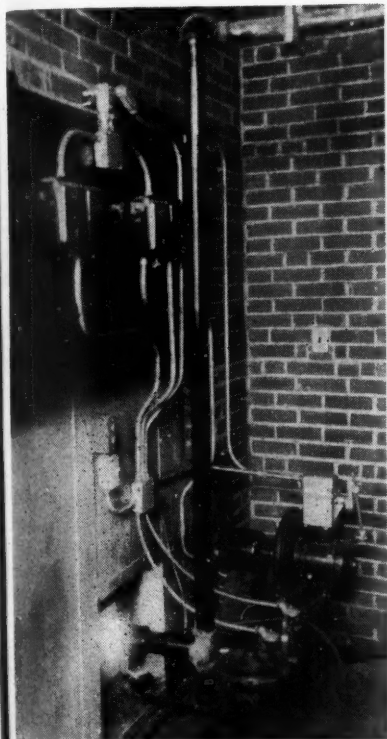
Fuelite Natural Gas Corp., Lexington, Mass.

**P**RODUCTION at Camp Edwards, Mass., Post bakery was stepped up recently when a new bake oven, supplied with Fuelite

bottled gas, went into full production. While the particular type and model shown in the photograph has been used previously in conjunction with natural gas and butane, this installation is the first on propane to the best knowledge of the oven manufacturer, Middleby-Marshall.

Although the new oven requires only the amount of space occupied by one of the older ovens, it will bake twice as much bread in an hour's time. Its capacity of 400 loaves every 35 minutes will greatly augment the production of bread already being baked in three remaining peel type coke ovens. In addition to being a completely automatic 10-tray oven, the unit incorporates other features which make the baking of bread as nearly foolproof as possible.

The oven is fired with a Maxim premix tunnel burner, located in an adjacent room directly behind the oven proper. Fuelite bottled gas is piped into the Post bakery at 14 ounces pressure through two Bastian-Blessing heavy duty regulators, either one of which could handle the volume alone, and is then reduced through a Fisher regulator to the six ounce operating pressure of the burner. The burn-



Burner equipment located behind the oven in adjacent burner room.

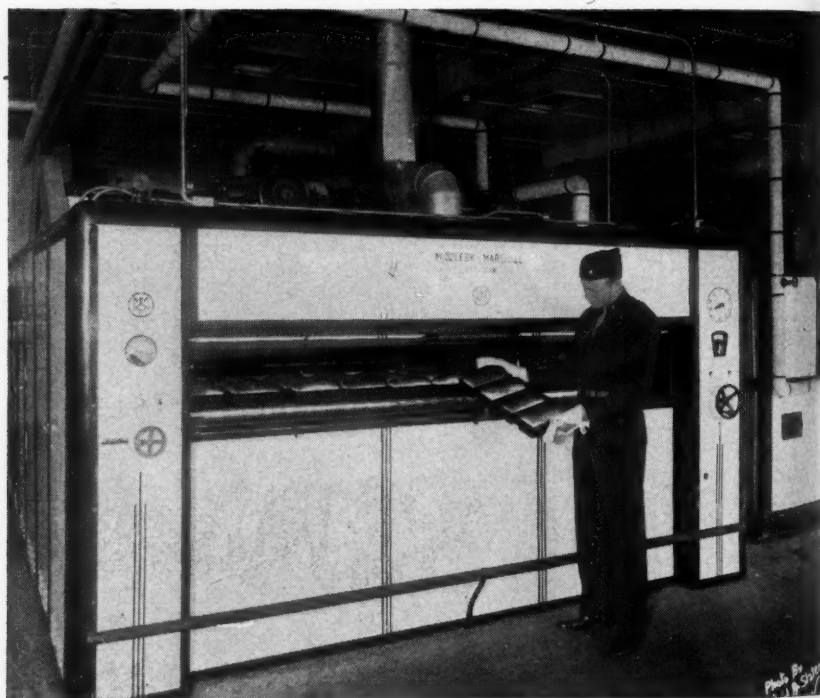
er equipment is fully automatic once it commences operation and is completely equipped with the usual safety devices found on industrial ovens of this kind.

This new oven completes an array of mechanical bakery machinery at the Camp that might well be the envy of any commercial baker. From the time the dough leaves the 650-lb. capacity mixers, the process continues through machines that divide each individual piece into the desired weight. Instead of rounding these pieces by hand and letting them rise, as mother used to do, two machines do this work. Still another machine automatically flat-

tens each piece of dough, and rolls it up ready to be placed into the bake pans.

Making the bread for an entire camp and surrounding installations isn't just a matter of pressing buttons, despite the fact that this particular Post bakery contains the most modern machinery available. First Lieut. Forrest E. Wilke, Post bakery officer, heads a group of 40 men who work in two shifts to produce the amount of bread demanded by the soldiers. The bakery is open 24 hours a day and baking is under way seven days of the week.

Most people talk about bread in terms of "loaves," but at the Post



Lieutenant Wilke proudly displays bread baked in the army post bakery.

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bakery they think and work with it in tons. The exact amount of bread baked each day cannot be published for obvious reasons but by Dec. 28, 1943, the bakery's second anniversary, slightly over 10,000,000 lbs. of bread had been produced.

### Army Bread Is Good

Army bread appears on the table three times a day and must be consistently good to maintain its role as the basis of every meal. Lieut. Wilke declared, "There is no reason why army bread should not be good. We receive all the milk, sugar, lard and other ingredients necessary to make bread with the most nutritious content." Lieut. Wilke speaks with authority for not only is he a member of the American Society of Bakery Engineers, but prior to his enlistment in the U. S. army he was associated with his father in the baking business at Beatrice, Neb., where, incidentally, gas was the fuel used.

The "proof of the pudding is in the eating"—and there have been no complaints about the quality of the bread being baked under the careful supervision of Lieut. Wilke. The army supplies the very best of material from which this bread is produced, a well-trained personnel supervises its mixing by up-to-date machinery, and the dough is then perfectly turned into a loaf of bread that would be a credit to any housewife or commercial baking establishment.

Gas—the perfect fuel—again proves its place in the furtherance of the war effort by doing the job in this army bakery as only gas can do it. This time it is propane:

## Louisiana Group Holds Meeting

THE Louisiana Butane Dealers Association, Inc., held its annual meeting March 13 at the Roosevelt hotel, New Orleans. The meeting was called to order at 11 a. m. by the retiring president, C. W. Guy.

The guest speaker of the meeting was Frier McCollister, of the Lawrence H. Selz Organization, of Chicago, Ill., who discussed the advantages of publicity and how it could help the butane industry.

At this meeting the following officers were elected for the year 1944: J. R. Holicer, of Holicer Gas Co. Inc., Shreveport, La., president; E. C. Readhimer, of Readhimer Appliances, Inc., Campti, La., vice-president; Quentin Jones of Butane Gas Co., Houma, La., secretary; and W. A. Keller, of Keller Hardware & Butane Co., Bunkie, La., treasurer.

An executive board was elected and consists of the following members: J. R. Holicer, E. C. Readhimer, Quentin Jones, W. A. Keller, A. R. Blossman, of Covington, La., C. E. Lawrence, Butane Gas, Inc., Leesville, La., C. W. Guy of General Gas Corp., Baton Rouge, La., and Louis Abramson, Jr. of Petrolane Gas Corp., New Orleans, La. Ralph M. Kelton is the association's attorney and executive secretary.



Louisiana Butane Dealers' Seal

# Construction Problems of Canadian Synthetic Rubber Plant Disclosed

**C**ENSORSHIP has been lifted to allow disclosure of many of the details of Canada's hitherto secret \$48,000,000 Polymer Corp. at Sarnia, Ontario, only synthetic rubber plant in the British Empire, and a number of features of this giant undertaking, completed in less than 18 months from the time the first sod was turned in August, 1942, will be of interest to BUTANE-PROPANE *News* readers.

One of the main considerations in choosing Sarnia for the site of this synthetic rubber plant, which sprawls over 185 acres of what once was an Indian reservation, was the fact that the city is the site of a large Imperial Oil Co. refinery into which crude oil flows at the rate of 1,260,000 gals. per day from mid-continent United States fields.

## Cracking Plant Already Built

One of the benefits resulting from the proximity of the Imperial Oil refinery was that it eliminated the necessity of Polymer installing a large and expensive catalytic cracking plant, since the oil company already had four cracking coils. These coils were revamped for more severe cracking conditions and an additional unit installed to supplement them.

Pipes from these coils convey to Polymer daily 6225 barrels of liquid petroleum and 19,400,000 cu. ft. of petroleum gases. Some of the gas not used in making rubber ingredients is burned in the plant processing furnaces, and to operate gas engine compressors, while the balance is piped back to Imperial for use in refining operations. Union Gas

By R. W. CLARKE

Co. of Canada, serving a number of southwestern Ontario cities and whose Sarnia plant is surrounded completely by the vast Polymer set-up, also obtains some gas from Imperial for resale to various industries.

According to Imperial officials, the return of propane amounts to 700 bbls. daily while gasoline is returned at 1500 bbls. per day. Approximately 3180 bbls. of isobutylene-free hydrocarbons are fed daily into a butylene concentration unit where the normal butylenes required for butadiene are removed. The butane and isobutane are returned to Imperial.

One of the main "props" of the butylene concentration unit is a 165-ft. tower, constructed just outside the city of Montreal, in which the normal butylenes are extracted from a butane-butylene cut by means of a chemical solvent. And of the many feats of engineering performed in the construction of the Polymer plant, none was more amazing than the assembly, transportation and erection of this tower.

Three special flat cars had to be built to transport the tower the 500 miles from Montreal to Sarnia, and although the job of planting it on these cars took only 15 minutes, engineers sweated for two weeks in figuring how it would be done. Railway tracks, leading from the shop where the 150-ton tower was constructed to an adjacent railway siding, take a curve, and this meant that



the shop doors had to be knocked down to allow the tower clearance.

Once on the flat cars, the tower was given right of way on the journey to Sarnia and even the crack Montreal-Chicago express had to pull into a siding to allow it to pass. The freight train, moving only during daylight hours and at no more than 15 miles per hour, took five days to cover 500 miles. Track men rode along to inspect rails and check all bridges. Actual erection time at Polymer was only three hours.

Although Polymer is owned by the Canadian government, it actually is operated by three companies: St. Clair Processing Corp., a subsidiary of Imperial Oil; Dow Chemical of Canada, a subsidiary of the Dow company at Midland, Mich.; and Canadian Synthetic Rubber Ltd., a subsidiary of Goodyear, Firestone, Dominion and Goodrich.

Polymer's estimated annual output is 34,000 long tons of Buna-S and 4000 long tons of butyl rubber.

### **No Priority Needed on Copper Up to 150 Lb.**

The war production board announced last month that users of small amounts of copper raw materials may now obtain in any calendar quarter materials containing up to 150 lb. of copper without obtaining authorization from WPB. However, this material may not be used for any purposes prohibited by existing orders.

This action was taken by the issuance of Direction 2 to conservation order M-9. The direction specifically cautions: "It is to be noted that the material obtained under this direction may not be used in violation of conservation order M-9-c or any other order or regulation of the war production board."

## **Eastern Section Meets April 13-14**

The program committee of the Eastern Section, LPGA, has selected the dates of April 13-14 for a special meeting. The place is the Hotel Pennsylvania in New York City.

Announcement has been made that it is extremely important for those who expect to attend to make reservations immediately as restrictions imposed by war-time conditions will not permit the arrangement of last minute accommodations. Members should notify Miss Florence Jacob, acting secretary, LPGA, at 11 West 42nd St., New York 18.

An interesting and instructive program is being arranged for the meeting.

### **W. A. Cheshire Heads Western Tank Truck Section**

The Office of Defense Transportation announced March 9 the appointment of W. A. Cheshire as regional chief of the tank truck section of ODT's Division of Petroleum and Other Liquid Transport with headquarters in San Francisco. Mr. Cheshire's district will include the States of California, Oregon, Washington, Nevada, Arizona, Idaho, and Utah.

The ODT said that the Regional Offices of the Tank Truck Section have been established in order to work more closely with the Tank Truck operators in the transportation of petroleum and other liquid products and to coordinate the available tank truck facilities with the review of tank car permit applications by the ODT's Tank Car Service Section.

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our best "silent salesmen" for bigger  
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*Grand*

**GAS RANGES**

GRAND HOME APPLIANCE COMPANY • CLEVELAND 4, OHIO

# The Future of LP-Gas - War and Postwar.

## Will Highlight NGAA Convention

**T**HE 23rd annual convention of the Natural Gasoline Association of America will open at 2 o'clock on Wednesday, April 12, at the Baker hotel in Dallas, Texas. Session will continue, mornings and afternoons through the next two days.

Of special interest to men in various branches of the liquefied petroleum gas industry will be a paper prepared jointly by seven companies which is addressed to LP-Gas marketers to give them information upon the sources of supply in the postwar days.

The rest of the program will be heavy with technical discussions, according to Wm. F. Lowe, secretary of the association.

James W. Vaiden, president of NGAA and vice president of Skelly Oil Co., Tulsa, Okla., will open the first day's meeting with an address titled, "Time." Other subjects and speakers on the three-day session program, as tentatively arranged, follow:

**Wednesday, April 12, 2:00 p.m.**

"Why and Where to Build a Natural Gasoline Plant," by Frank Matheny, superintendent Natural Gas and Gasoline Department, Phillips Petroleum Co. (This paper will review the many factors which should be

considered before a plant is built, including analysis of reservoir fluids, estimates of fluid and gas reserves, possibility of pressure maintenance and repressuring, effect on plant design, etc.)

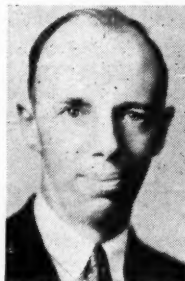
"Infra Red Spectrograph Analysis of Natural Gas Hydrocarbons," by H. Cary, National Technical Laboratories, Pasadena, Calif. (Without delving too deeply into the complex mathematics of the method, this discussion will present the possibilities for accurate and quick evaluations.)

"Centrifugal Compressors and Their Application in Natural Gas and Natural Gasoline Operations," by E. O. Bennett, engineering consultant, Houston, Texas. (A complete review of the development of this device to its present practical stage and its possibilities for handling high pressures and large volumes of natural gas, with some comments on gas turbines.)

Technical Committee report by M. R. Church, Shell Oil Co., Inc., Houston. (Covering work by that group on fractional analysis, hydrocarbon



**WM. F. LOWE**



**H. W. HARTS**



**JAS. E. PEW**

constants, LP-Gas sulphur determination, etc.

Thursday, April 13, 10:00 a.m.

"The Future of Liquefied Petroleum Gases." (This paper is to be a symposium of opinion as to the supply of these products in: 1, Balance of the War Period; 2, Immediate Post-war Period; and 3, Three to Four Years of Peace Time Developments. Companies contributing include: Carbide & Carbon Chemicals Corp.; Cities Service Oil Co.; Lone Star Gas Co.; Phillips Petroleum Co.; Shell Oil Co., Inc.; Skelly Oil Co.; Standard Oil Co. of California; and Warren Petroleum Corp.

Address—James E. Pew, director, Natural Gas and Natural Gasoline Division, Petroleum Administration for War, Washington, D. C.

"Catalytic Cracking, Asset or Menace to Natural Gasoline Operations," by D. P. Barnard, associate director of research, Standard Oil Co. of Indiana, Whiting, Ind. (With the predicted cut-back in 100 octane aviation fuel after the war, will the huge refining plants built for the purpose have an excess of light ends or will refiners still need natural gasoline. A broad discussion of possible postwar fuel requirements, economics and supply and demand as influenced by modern, war erected, refining plants.)

Presentation of the Hanlon Award.

Afternoon Session, 2:00 p.m.

High Pressure Gas Session

"Unitization of Condensate Pools," by Roy L. Benoit, Ohio Oil Company, Shreveport, La. (A discussion of the legal and contracting difficulties in drawing of unitization agreements.)

"Operating Economies of Unitization," by Jack Flaitz, Distillate Production Corp., Houston. (The great savings in investment and operating



HENRY WADE



P. S. MAGRUDER

as well as the conservation of natural resources.)

"Condensate Gas Sampling," by Dr. G. G. Brown and Dr. D. L. Katz, University of Michigan. (A report of the cooperative field experiments conducted by these men in the Katy Field of Texas under the sponsorship of the NGAA, and recommending a standard method for obtaining a representative sample of two-phase natural gases.)

Discussion by Kenneth Eilerts, Senior Chemist, U. S. Bureau of Mines, Bartlesville, Oklahoma.

Friday, April 14, 8:30 a.m. and 2 p.m.

"Information Please" Session

Purpose: To provide a forum where executives and technical men of the natural gasoline and condensate industries can question the leading authorities on processing, production and operating trends with a view to obtaining guidance for the present and future operations.

Interlocutor: D. E. Buchanan. He will be assisted by a question screening committee consisting of: H. W. Harts, Warren Petroleum Corp., Tulsa, chairman; M. E. Mockley, Anchor Petroleum Co., Tulsa; R. G. Atkinson, Shamrock Oil & Gas Corp., Amarillo; I. Earl Nutter, Hagy, Harrington & Marsh, Amarillo; W. W.



D. E. BUCHANAN



E. O. BENNETT

McNeal, Jr., J. S. Abercrombie Company, Houston.

Those being invited to participate as members of the Panel of Experts include the following:

Representing process companies: Gustav Egloff, Universal Oil Products Co., Chicago; John Ford, M. W. Kellogg Co., New York; A. J. L. Hutchinson, Fluor Corp., Los Angeles.

Representing design and construction companies: M. F. Kotzebue, Gasoline Plant Construction Co., Houston; P. M. Raigorodsky, Petroleum Engineering, Inc., Tulsa; Henry Wade, Stearns-Roger Manufacturing Co., Denver.

Representing the Petroleum Administrator for War: James E. Pew, Director of Natural Gas and Natural Gasoline Division.

Representing the refining industry: D. P. Barnard, Standard Oil Co. of Indiana, Whiting, Ind.; W. W. Scheumann, Cities Service Oil Co., Lake Charles, La.

Engineering Consultants: Dr. G. G. Brown, University of Michigan, Ann Arbor; Dr. E. O. Bennett, Houston.

Representing production and research: R. C. Alden, Phillips Petroleum Co., Bartlesville, Okla.; Stuart Buckley, Humble Oil & Refining Co., Houston; P. S. Magruder, General Petroleum Corp., Los Angeles.

## New Catalytic Cracking Unit Starts at Wood River, Ill.

The fluid catalytic cracking unit, constructed at Wood River, Ill., by The M. W. Kellogg Co. for the Standard Oil Co. (Indiana), started initial operation on February 25.

As is customary in these fluid catalytic cracking units, the heated catalyst is continuously fed to a preheated oil stock. The unit was originally designed for motor fuel production and later changed for severe gas oil cracking to produce aviation gasoline stocks. The unit differs somewhat from the standard Kellogg design in that the reactor and regenerator are supported on skirts from the ground up to gain rigidity, instead of being upheld by the main structure, and in that critical tube and shell heat exchanges were conserved by the use of a pipe coil condenser box for condensing the cracked vapors.

At the peak of construction, nearly 1000 men were employed. The two large vessels were completely fabricated in the field. Some of the welding involved plate 2¼ in. thick, and seams were completely x-rayed to insure their quality.

## CNGA Will Frolic At Rio Hondo June 3

The annual "June Frolic" of the California Natural Gasoline Association will again be held at the Rio Hondo Golf Club, Downey, Calif., this year on Saturday, June 3, according to an announcement by George L. Tyler, secretary of the organization.

The annual fall meeting of the association will be held next Oct. 13 at the Los Angeles Biltmore hotel. This date is earlier than in past years and was determined upon to avoid conflict with other meetings usually held in late October and early November.



# THE BOTTLED GAS MANUAL

## The Tools of Our Profession

### Chapter 24

### —Conclusion—

• The Bottled Gas Manual series, by C. C. Turner, of Portland, Maine, started in the July, 1941, issue of BUTANE-PROPANE News and has run continuously since then. The current installment, Chapter 24, is the final one.

All of the chapters of this valuable field manual are to be bound into book form and will be for sale by us.

Everybody in the liquefied petroleum gas industry will profit from having this book. Sales and service men may well carry it with them at all times for reference.

In bringing to a close this important contribution to the industry, the author and BUTANE-PROPANE News hope our readers have profited in proportion to our satisfaction in having had the opportunity to present so helpful a guide to industry practices, problems and principles.—Editor.



C. C. TURNER

marked lanes which lead to nowhere.

If you are contemplating becoming a dealer I have a few last minute words which I would say to you. If your idea of the bottled gas business is just one of "buy and sell" merchandising, stop in your journey before you start. This is really a business which requires investment in time and money in the public's service, and the returns which you get from it will be proportional to what you put into it. The difference between what your merchandise costs and what you sell it for is not all profit even after your overhead costs have been deducted, for you must plough back an investment in equipment with which to do business. To me, this is a system of enforced savings and one of the finest things about this business. I know of more than one instance where a dealer has got into financial difficulties outside of his bottled gas business and the thing which has saved his neck has been the fact that over a period of years he has been forced to invest in equipment on which he has been able to borrow money.

I do not propose to go into the

**T**ONIGHT our many happy evenings at Gracourt's fireside draw to a close, and it is with sincere regret that I realize the time has come when you must set forth upon your journey alone. It is a road which I have travelled, know well, and love. I hope that the things which I have said will go with you always and serve to help you in avoiding the pitfalls and un-

economics\* of this business other than to mention one or two pertinent facts. I do not know of any other business requiring an investment in plant and equipment where the retail operator can get by with as little initial outlay and operate on a "pay-as-you-go" basis. If you were going into the oil business you would require large storage tanks before you delivered a dollar's worth of merchandise. Here your cylinders take the place of storage tanks, but the investment may be made as you have need for fuel storage.

Because of this fact, however, you should not make the mistake of getting into the bottled gas business without sufficient capital to tide you over the first year or two. In this period of initial development you will find that practically all of your profits will have to be ploughed back into the business again, but they will show up on your books in the form of investment, customers gained, and good will.

Over 90% of the appliance and automobile sales in the United States have been made on conditional sales contracts, or mortgages. You cannot make much progress in this business unless you are in a position to finance such sales, and I suggest that you make sure that some reputable financial institution will discount your paper

on a fair basis before you go into this business.

Capital and financial backing are not the only things that you are going to need. Perhaps of paramount importance is a genuine interest in people and human nature. In serving the American housewife you are going to learn much concerning feminine whims and foibles. If you aren't an interested student of human nature you will never get very far in this industry.

### Sell Good Merchandise

There is no need to have the most expensive store located on Main Street in your town, but wherever it is located it should be clean, orderly, attractive and interesting. Furthermore, the merchandise which you sell or display should enhance your reputation. Over here in New England we think very highly of certain lines of appliances, and the manufacturers seem to be rather choosy about who represents them. The names of these manufacturers mean more to the public than does Percival W. Kniblenpin, and dealers are not slow to realize this. Sell quality products, and leave the junk to the discount artists and mail order houses. They'll sell some merchandise in your territory to be sure, but even if the quality should be comparable they cannot render the intelligent and efficient service which you are in a position to provide, and the public won't be slow to find this out.

The employees which you have should not only have ability, but the respect of the community as well. Knowledge of this business should be at their disposal. It is

\* The author went into this phase of the business rather completely in three articles on "Bottled Gas Marketing" starting with the May, 1941, issue of BUTANE-PROPANE News. The "Handbook Butane-Propane Gases," Third Edition, should also be in the hands of every operator in the industry as it is a valuable reference work.

foolish to think that by keeping them in ignorance you can keep them subjugated to you. This way of thinking is medieval and doesn't work out in this day of free education. It is far better to pay your employees in fair proportion to their worth and to make them feel that they are in business *with* you. Changing employees is expensive and doesn't help to build the public's confidence in your organization.

Your greatest assets in building business are, *truthfulness, sympathetic understanding* of the customer's desires, and *service*. By service I do not mean giving labor and material away. People do not really expect you to do this, but will accept it if you wish to be a Santa Claus. The majority of them expect to pay fair prices for what they get. There will be times when you will have to do jobs and furnish materials without charge. When you are confronted by such a matter make your decision on the basis of your moral obligation, and *stick to it!*

Do not jeopardize the future of your business or the welfare of others engaged in it by failing to provide proper insurance. The record of our industry in regard to accidents has been an admirable one due to its members cooperating with advisory and regulatory organizations, but 100% compliance with all regulations does not protect you against the failure of materials due to flaws or errors in human judgment. In intent and purpose you may be entirely innocent, but the courts may adjudge you as being liable for the results

of an accident. It is poor economy to slash this item of expense from your budget.

I have spoken of regulations. Do not be a party to or even condone any violations. These regulations have been set up just as much for your own protection as for the protection of others. Perhaps you may feel that deviation from regulations may be justified in occasional instances, but just because you think this way does not make it so. Put these matters up to the regulatory bodies. You will find them cooperative and reasonable.

#### Abide by Regulations

In this connection, don't go contrary to the rulings of a national organization because some local fire chief or insurance agent says that it is "O.K." to do so. When it comes to the matter of the validity of an insurance policy in point of law the regulations of the National Board of Fire Underwriters hold. Every policy in which fire is concerned is written subject to their regulations, and the insurance people don't have to pay anybody anything if you have violated their regulations unless the N.B.F.U. has granted you permission for an exception.

Secretiveness breeds curiosity. Adam wasn't particularly interested in Eve until she donned a fig leaf. Don't forget this fact, and be frank with your customers just as you are frank with your employees. You are entitled to an income proportionate to the service which you render the public, and the public is willing to grant this to you. You can be beggar, prince, or king in the way that you collect

that which is justly due you. Be a beggar, and your pittance will be flung at you. Be a prince, and it will be kindly given to you. Be a king, and you can have it graciously or grudgingly according to your dealings with the public. Wise kings have taken their subjects into their confidence and have asked them to help in ruling. When the public knows nothing about the expense of operating a business they feel that it must be a bonanza. In a tactful way let your customers know that their installation requires an investment on your part which can only be repaid through their business for years to come. It isn't a bad plan to let them know something about transportation and delivery costs and depreciation.

#### Buy Good Service Tools

In reference to your service department, don't economize on necessary tools and don't buy cheap ones. Cheap tools are not only unsatisfactory, but they may cause injury to your employees. I have heard dealers excuse their failure to buy good and necessary tools by saying that their employees either lose or break them. This is really no excuse, for your service department employees should be held financially responsible for the loss or abuse of tools. This can be done if you provide tool boxes in which there is a place for everything. A further advantage of insisting on this degree of orderliness is that of inspiring thoroughness and cleanliness in work performed.

If you are a salesman, you, too, have tools which are necessary. Many of these tools are intangible

ones which you carry in your mind. Let us consider these.

First, cultivate the conviction that *selling is an art*. Don't look upon it as an easy way to make a living, for it isn't. Salesmanship is not just a gift of "gab" and quick wit. Many of the best salesmen I know are *pluggers*, *deep thinkers*, and real *students of human nature*. They are not even brilliant conversationalists or snappy dressers, but they get results because they impress people with their trustworthiness, and sell their products strictly upon merit.

Here are a few general rules for successful selling:

1. Sell yourself upon your product.
2. Sell yourself upon your company.
3. Lose your identity in your product and your company.
4. Make a systematic search for reasons why people should buy your product.
5. Learn to present your case in logical sequence.
6. Tell nothing but the truth about your product.
7. Do not make promises that you cannot fulfill.
8. Don't bore the prospect with your "personal experiences" or life history. The chances are he doesn't care a rap about either.
9. Be punctual and dependable.
10. Don't talk yourself out of a sale by failing to ask for the order at the psychological time.

The tangible tools with which you work are yourself, your cata-

log, your sales aids, and your appliances. In regard to yourself, there are two rules of salesmanship which I am going to mention:

1. Your appearance. Dress neatly, but not flashily. Sales have been lost by a gaudy necktie which attracted the customer more than the salesman's sales talk.
2. Your recreation. Remember that this word is really made up of two words and that it means "to create over again or to refresh." Have a hobby or a pastime that wholesomely refreshes you.

Spend some time and money in making your catalog a real sales tool. Keep it that way by continuing to keep it neat and up-to-date. Have your retail prices so located and in such shape that if necessary you can show them to the customer. Avoid, if possible, the necessity of figuring percentages "off" or "on" in the customer's presence, for it puts in his mind the thought that he can possibly "chisel."

You will probably have an automobile. In buying it, look for economical transportation rather than snappy lines and the prestige of a particular manufacturer's name. Keep it neat and in good repair, for the car's appearance does reflect your character in the customer's mind. Above all, don't let your car afflict you with "miletis." This is a mental disease to which all salesmen with automobiles are susceptible, and its symptoms show up in travelling unnecessary miles for business when it is available at your own back door!

If you are selling from actual appliances, be sure that they are clean, attractively displayed, and in proper working order. If you have to make excuses for dirt or burners that are improperly adjusted it greatly lowers your prestige in the customer's mind. Remember, much of your sales talk will be built up around the cleanliness of bottled gas and its dependable appliances.

#### Note to Servicemen

My parting words have been saved for servicemen or engineers, for perhaps these evenings of ours together have meant more to you than to the other groups. You are equally important to *management* and *sales* in the success of this business. The final and most lasting impression which the customer has of this industry is left by *you*. You can create the desired, favorable impression by your *neatness*, *thoroughness*, and *tact*. Don't let your associates down by being untidy, slipshod, or lacking in diplomacy.

Buy good tools, and take good care of them. Build one or more tool boxes in which there is a place for every tool that you carry. Pack each tool back into its proper place before leaving the job. In this way you can eliminate losing tools by leaving them on the job. If others have access to your tools in between jobs, check them before starting out.

For several years I have carried two tool boxes with me. One box contains the tools I most frequently use, and the other I call my emergency kit. The box that I most frequently use was built out of com-

mon 1/2-in. boxwood. There is a place for everything in it, and here are the tools which it contains:

### WRENCHES

#### Open End Wrenches

- 1 1/4" x 1 1/8"
- 1" x 15/16"
- 3/8" x 25/32"
- 3/4" x 5/8"
- 11/16" x 19/32"
- 9/16" x 1 1/2"
- 13/32" x 5/16"

#### Box Wrenches

- 7/16" x 3/8"
- 9/16" x 1/2"

#### Stillson Wrenches

- 2 10"
- 1 8"

#### Allen Wrenches

- 5, taking all sizes through 3/8"

### PLIERS

- 8" common
- 6" diagonal cutters
- 5" long thin nose

### SCREW DRIVERS

- 11" heavy duty
- 5" with small blade
- 3" heavy stub
- 4" double offset
- bitstock screw driver

### MISCELLANEOUS TOOLS

- 1 prick punch
- 1 nail set
- 1 pair tin shears
- 1 bitstock
- 1 3/8" extension bit
- 1 1/2" extension bit
- 1 3/4" extension bit
- 1 oven thermometer
- 1 flaring tool
- 1 1/4" N.C. tap
- 1 5/16" N.C. tap
- 1 3/8" N.C. tap
- 1 1/4" N.F. tap
- 1 5/16" N.F. tap
- 1 3/8" N.F. tap
- 1 gas pressure gage

- 1 steel brush
- 1 can orange shellac
- 1 can gas joint cement
- 1 can cutting oil
- 1 can No. 70 hoods
- 1 piece sheet zinc
- 1 assortment small nails
- 1 line level
- 1 6" level
- 1 hack saw
- 1 set drills, 1/16" through 1/2" by 32nds
- 1 pin vise
- 1 refrigerator thermometer
- 1 set machine screw taps and dies with tap wrench and die holder
- 1 micrometer
- 1 inside caliper
- 1 depth gage
- 1 set dividers
- 3' of 1/4" rubber tubing
- 1 putty knife

### SUPPLIES

- 1 can iron cement
- 1 can water pipe cement
- 1 can gas cock lubricant
- 1 piece sheet lead
- 1 assortment stove bolts
- 1 ice pick
- 1 hammer
- 1 hand drill
- 1 set wire gage drills Nos. 1 through 8
- 1 small bench vise
- 1 cold chisel
- 1 tubing cutter
- 1 spud tap
- 1 3/16" stove bolt tap
- 1 set thread gages
- 1 set thickness gages
- 1 outside caliper
- 1 angle protractor
- 1 1/4" electric drill
- 1 set screw extractors
- 3 drill gages
- 1 can stove putty
- 1 can machine oil



1 can No. 70 spuds  
1 piece sheet copper  
1 assortment screws

This kit is compact and weighs only about 75 lbs. I have found that with it I can handle practically any gas job that one will run across in the field. If pipe is used instead of tubing it would be necessary to add a set of pipe dies, a pipe cutter and a pipe vise. These tools I carry in my other tool kit along with a few wood-working tools.

Be neat and exacting in your work. Be neat in your appearance. Clean up the mess which you have made after you are through with the job. Apologize to the lady of the house for any inconvenience which you have caused her. Conduct yourself so that you will be thought of as a gentleman worthy of the company that you represent.

#### It's Time to Say Goodbye

The fire burns low on Gracourt's hearth, and the time has come for us to say goodbye. I hope that we meet again. These evenings have been happy ones for me, and I regret the ending. For you I wish the enjoyment and happiness which the bottled gas business has brought to me. It is a young industry upon the threshold of greatness, and it holds unthought-of opportunities for those who are genuinely interested in it and apply themselves. May these evenings together open your eyes to its possibilities and start you on a path which shall be pleasant and profitable.

And so, companion of these happy hours together, I wish you God-speed!

## Changes Proposed In Texas Code

ON Jan. 6, 1944, a petition was filed jointly by J. H. Winton, representing Winton Automatic Gas Co., Beaumont, Texas; H. C. Pittman, representing Automatic Gas Co., Inc., Tyler, Texas; W. G. Ellis, representing Automatic Butane Gas Co., Houston, Texas; and J. R. Holicer, representing Holicer Gas Co., Inc., Shreveport, La., requesting the Railroad Commission of Texas to amend its order in Gas Utilities Docket No. 141, which became effective Sept. 15, 1941, as follows:

1. That Basic Rule B.3(a) be made to read in such manner that vessels constructed in accordance with the API-ASME Code shall be acceptable for installation in the State of Texas.
2. That the following sub-parts (1), (2) and (3) be added to and made a part of Basic Rule B.3:
  - (1) Calculation of vessel wall thickness shall be computed on the basis of a tensile strength of 55,000 lbs. per sq. in. as provided in the ASME Code, 1940 Edition.
  - (2) Calculation of design thicknesses shall also be computed on the basis of a Safety Factor of 5 as provided in the ASME Code, 1940 Edition.
  - (3) Corrosion allowance shall be a minimum of 1/32nd in.

A hearing was held before the Commission on March 14 at the capitol building in Austin and a decision is expected to be rendered early in April.

Members of the Texas Railroad Commission are Beauford H. Jester, chairman; Olin Culberson and Ernest O. Thompson, commissioners, and L. D. Ransom secretary.

# LP-Gas Test Methods Among CNGA's Four Objectives

By R. W. HEATH

President, California Natural Gasoline Association, Los Angeles

**L**IKE all activities requiring the services of specialized technical men, the California Natural Gasoline Association's technical program has been adjusted and curtailed to include only essentials based on war-time expediency. Since the work of developing technical standards for release by the association is done by committees made up of men from the industry already operating shorthanded, the time of these men must be well spent and justified by the yardstick of war-time necessity.

Accordingly, four problems only are being actively carried on by CNGA under the general direction of R. R. Crippen, The Texas Co., chairman of the technical committee. First of these is the extension of the superexpansibility factors as set forth in Bulletin TS-354, "Tentative Standards for the Determination of Superexpansibility Factors in High Pressure Gas Measurement," to cover pressures to 5000 lbs. per sq. in.



R. W. HEATH

The need for this work is apparent when one contemplates present and future activities involving high pressure operations in the newer fields. This work is being carried on by the gas measurement committee under the chairmanship of J. T. Cortelyou of the Southern California Gas Co.

## Charcoal Test Bulletin Revised

A second problem now receiving attention is the re-writing of Bulletin TS-351, "Procedure for the Charcoal Test for the Determination of the Gasoline Content of Natural Gas." The necessity for this work arises from the fact that the original bulletin issued in 1935 has undergone many revisions with the result that it no longer conforms with the standardized arrangement of material used in later bulletins developed by the editorial and revisions committee. Thus the material in TS-351 will be made more readily usable. This work is being carried on by the charcoal test committee under the chairmanship of T. F. G. Boyd, Union Oil Co. of California.

Third on this list of active problems, but of no less importance than the others, is the preparation of a new work to supersede Bulletin TS-392, "Tentative Specifica-

tions and Tentative Standard Methods of Test for Liquefied Petroleum Gases," which has been out of print for some time.

The need for this enlarged and improved work has been urgent and its preparation has involved much painstaking effort. When completed, it is expected to contain much new material such as weathering test procedure, method for determining the water content of liquefied petroleum gas, and volume correction factors as developed by the Natural Gasoline Association of America and to be incorporated in the new bulletin with their permission.

Other additions and improvements will be found in the bulletin which is in its final stages of preparation. This work has been carried to its present state of near completion by the liquefied petroleum gas committee under the chairmanship of C. L. Hutchings, Tide Water Associated Oil Co., working closely with the editorial and revisions committee, of which G. N. Hile, Standard Oil Co. of California, is chairman.

#### Table of Physical Constants

Last, but not least, is the proposed new table of physical constants, a revision of Bulletin TS-401, "Physical Constants of the Components of Natural Gas and Gasoline." The work on this table has been carried on in collaboration with the Natural Gasoline Association of America and it is anticipated that full agreement with them will shortly be reached on all values and the table issued as a joint standard. It is then planned

to submit this work to API for possible adoption by them as standard.

Insofar as is practicable, the California Natural Gasoline Association works closely with other groups in the development of technical standards. It has been found that the exchange of ideas and data among the various organizations is mutually helpful and serves to eliminate possible duplication of effort in the development of standards.

#### Synthetic Rubber Tire Marks Reveal Composition

According to a recent report, synthetic rubber tires are now being marked with symbols which reveal the composition of the tire in relation to the amount of rubber, natural or synthetic, used in fabrication.

The mark S-1 indicates an 80% synthetic tread on a natural rubber carcass.

S-2: A 50% synthetic tread on a natural rubber carcass.

S-3: 100% synthetic tread; 100% synthetic carcass.

S-4: 90% synthetic rubber and 10% natural rubber distributed throughout the casing according to the manufacturer's selected fabrication requirements.

S-5: A 100% synthetic tread on a natural rubber carcass.

S-6: 70% synthetic rubber and 30% natural rubber distributed throughout the casing according to the manufacturer's selected fabrication requirements.

S-7: Is an alternate for the S-5 type which permits the manufacturer to vary the amounts of synthetic and natural rubber between carcass and tread.



**REGO**  
LP GAS EQUIPMENT

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## **Turntable Aids Cylinder Spraying**

**N**EVER a cylinder filled at the modern bulk plant of L. L. Parlett, Waldorf, Md., goes out to the customer with its bright aluminum finish marred, scratched or dingy in appearance. Yet, due to a simple little turntable device, the spraying operation is accomplished with a minimum of handling and at a fraction of a minute's time per bottle.

The turntable, which can be duplicated in any bulk station, is merely an automobile wheel, mounted on its upended axle which is

rigidly supported underneath the floor in a small block of concrete. Attached to the face of the wheel is a circular wooden table, projecting through the floor at exactly floor level, but with about an inch of clearance on all sides to allow it to revolve freely on the wheel bearings.

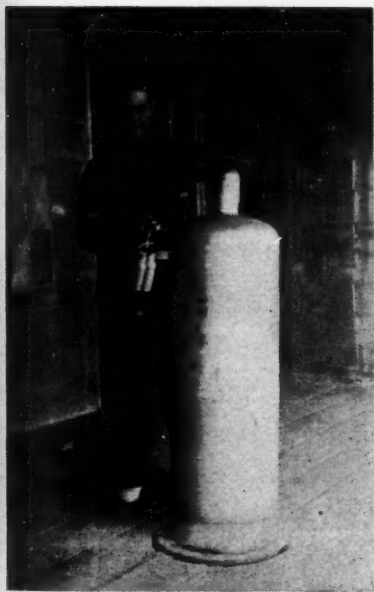
The painting is carried on in a small alcove off the filling room, all floors of which are truck-bed height. The operator rolls the cylinder on the wheel, gives it a slight spin with his left hand the while he moves the spray gun up and down with his right. One spin is sufficient to carry the cylinder through enough revolutions to complete its refinishing.

Due to the revolving motion the spray flows evenly, and the finish has a higher sheen than is ordinarily imparted by the spray painting process.

### **PAW Revised Orders Cover Maintenance and Repair**

The Petroleum Administration for War has announced that revisions of Preference Rating Orders P-98-b and P-98-e extend to oil operators who provide maintenance and repair service to retail and consumer outlets the right to use an AA-3 rating.

The two orders were revised, PAW explained, in order that the rating for this type of repair work by the petroleum industry would be brought to parity with that of the recently amended CMP Regulation 9A, which likewise assigns a rating of AA-3 to repairmen, and to assure centralized supervision by PAW in places where critical materials are involved.



Spraying a cylinder as it revolves on a turntable.

# Alabama Service Commision Threatens to Control LP-Gas

**T**HE Alabama Public Service Commission on Feb. 24 took under advisement a case questioning jurisdiction of the commission over Green's Fuel, Inc., of Florida, a butane gas distributor.

The butane gas company was asked by the commission to appear to show cause why it had not obtained a permit from the commission to operate as a public utility in Alabama.

K. H. Koach of Sarasota, Fla., vice-president of the butane firm, told the commission his company did not consider itself a public utility and that



K. H. KOACH

his firm sold butane as a liquid and not as a gas.

The hearing, described by the Public Service Commission as a "test case" in its announced intention of assuming jurisdiction over other butane gas companies who operate as public utilities in Alabama, developed in connection with the firm's operations in Mobile.

Two subdivisions of Mobile, Westlawn and the Country Club Village, are served by the butane firm.

The butane firm claimed it has a "strictly private contract" with the Mobile subdivisions to furnish a "liquid petroleum gas" for cooking and heating purposes and that it is not engaged in a public utility.

The Public Service Commission recently announced it was assuming jurisdiction over butane gas companies operating in Alabama since it judged them to be public utilities



A portion of housing project known as Mobile Homes, Inc., Mobile, Ala., served with LP-Gas by Green's Fuel, Inc., Sarasota, Fla.





Equally important in war plant production and home front, in field and factory, on airway, railway or highway, Warren's Liquefied Petroleum Gases are essential for heat and power. Alert, aggressive distributors and dealers are planning for tomorrow's possibilities while taking care of today's markets for Butane and Propane. And with ever-increasing production, storage and shipping facilities, Warren is giving consideration to future requirements—planning to take care of our customers now and during the post-war period.

# WARREN

## PETROLEUM CORPORATION

### Tulsa, Oklahoma

Manufacturers, Exporters and Marketers of  
Natural Gasoline, Liquefied Petroleum Gas  
and Chemical Grade Hydrocarbons

similar to other gas and electric companies.

If the commission rules against the butane firm, the gas company could then appeal to the Montgomery Circuit Court.

In commenting on the case, Mr. Koach said that, "A situation has developed in the State of Alabama which promises to be quite a serious matter from the standpoint of the welfare of the liquefied petroleum gas industry. Should the Alabama Public Service Commission be able to force all liquefied petroleum gas distributors to come under its thumb as a public utility, similar action might be attempted in other states.

"My firm is fighting against any encroachment by the Commission upon our status as an independent distributor of a product of the petroleum industry. All members of the industry in the State of Alabama attended the hearing, and we are putting up a unified front. A decision by the commission should be rendered shortly before April 1."

### **Training Course for Appliance Salesmen**

The California State Department of Education, cooperating with the Pacific Coast Gas Association, completed a sales training course for gas appliance salesmen about the time war broke out. The course was made available to individuals, associations and other groups interested in retail merchandising of gas appliances. While selling in general is out for the duration, dealers may wish to fortify themselves with valuable sales material to use at the close of the war.

In California, under the provisions of the George-Dean Act, instructors may be provided for classes in communities where a program of distributive education is in operation. No

doubt, similar arrangements can be made in other states which are cooperating with the Federal government in encouraging sales training.

This course is made available in 14 separate units, each unit dealing with one phase of selling gas appliances. Titles are as follows:

1. Gas Information Manual for Salesmen.
2. Science and Art of Successful Selling.
3. What Makes People Buy Gas Appliances.
4. The Salesman and the Sales.
5. When Customers Call.
6. Prospecting from Inside the Store.
7. Getting Business Outside the Store.
8. The Development and Use of a Prospect File.
9. Preparing to make an Effective Sales Presentation.
10. Making an Effective Gas Range Presentation.
11. Making an Effective Presentation of Automatic Gas Water Heaters.
12. Making an Effective Gas Refrigerator Presentation.
13. Making an Effective Presentation of Gas Heating.
14. Types and Traits of Prospects.

The title of the course is "Sales Training Program for Gas Appliance Dealers and Salesmen, Merchants, Plumbers and Distributors."

Copies of the course may be purchased from the California State Department of Education for 20 cents a unit or \$2.50 the set of 14 units. Address: California State Department of Education, Bureau of Business Education, 114 Haviland Hall, University of California, Berkeley, Calif.

# CURRENT READING

• Reviews of new books, pamphlets and articles published in recent magazines of interest to technicians and executives in the liquefied petroleum gas industry.

**Aviation Gasoline Manufacture**—Mineral Industries Series by Matthew Van Winkle. A book for natural gasoline plant and refinery operators, with special emphasis upon characteristics of high-octane fuels demanded by aviation under war-time needs. Among subjects treated are: Specifications and test methods of aviation fuels; hydrocarbons in aviation fuel and in aviation fuel manufacture; the production of aviation fuel base stocks; and the manufacture of high anti-knock hydrocarbons. 275 pages; published by McGraw-Hill Book Co., Inc., New York.

**Viscosity of n-Pentane**—R. M. Hubbard and G. G. Brown. "Industrial and Engineering Chemistry," Dec., 1943, pp. 1276-1280. The viscosity of n-pentane was determined with a rolling ball viscometer in the range from 25° to 250° C. and at pressures up to 1000 pounds per sq. in. The resulting values are believed to be accurate within 5% up to 150° C. and within 10% at higher temperatures. A graphical comparison with data from the literature is shown.

**Thermal Analysis of Liquefied Gases**—H. S. Booth and D. R. Martin. "Chemical Reviews," Oct., 1943, pp. 57-88. A critical survey of the field of thermal analysis of liquefied gases has been made. The field was limited to binary systems in which both components were gases under standard conditions. The methods used to establish mole fractions and to deter-

mine their freezing points were reviewed, and the procedure used in this investigation was analyzed for possible sources of error. Forty-five binary systems were found in the literature and the salient facts about each system presented. The phase-rule diagrams of 44 of these systems were included. Errors in some of the work are obvious and some of these systems should be reinvestigated. These errors were probably due to impurities in the components, or to inferior methods for temperature measurement.

**Phase Equilibria in Hydrocarbon Systems: Heat of Solution of Ethane and Propane**—R. A. Budenholzer, B. H. Sage and W. N. Lacey. "Industrial and Engineering Chemistry," Nov., 1943, pp. 1214-1220. Experimental measurements were made to determine the change in enthalpy involved when either ethane or propane is dissolved in a relatively non-volatile hydrocarbon oil. Comparison is made between results obtained from calorimetric determinations and those calculated from the volumetric behavior of the system.

**Requirements for Relief of Overpressure in Vessels Exposed to Fire**—J. J. Duggan, C. H. Gilmour and P. F. Fisher. Transactions, American Society Mechanical Engineers, Jan., 1944, pp. 1-53. Pressure-vessel codes and regulations prescribe pressure-relief equipment but do not completely specify the necessary relief capacity to insure safety. Investigations show that the most effective cause of pressure increase is fire exposure as en-

countered in accidental conflagrations, and tests of the effects of such fire exposure on pressure vessels have been made and analyzed. Part 1 of the paper details these tests and analyzes the results. Parts 2 and 3 develop the necessary formulas to determine the sizes and capacities of the relief connections and apparatus and also present detailed statements of the applications of these formulas to pressure vessels and atmospheric tanks.

**Propane, Normal and Isobutane Recovered in Gas Treating Plant**—H. L. Phillips. "National Petroleum News," Jan. 5, 1944, pp. R-16, 18. Propane, butane and isobutane of over 95% purity, in addition to natural gasoline, are recovered as by-products of a plant extracting hydrogen sulfide from sour gas produced in southern Arkansas. The gas is passed through the purification and absorption units, the enriched oil after the stripped gas has been removed being treated in a heater, still and series of fractionators.

**Liquid Densities of Eleven Hydrocarbons Found in Commercial C<sub>4</sub> Mixtures**—Compiled by C. S. Cragoe, National Bureau of Standards Letter Circular LC-736. This 25-page booklet is the result of a study undertaken by the National Bureau of Standards, at the request of the Rubber Reserve Co., involving the preparation of a standard table of liquid densities of six C<sub>4</sub> hydrocarbons, occurring in feed stocks for 1,3-butadiene manufacture, for use in weight and volume conversions. In planning the study it was agreed: (1) To include two C<sub>3</sub> hydrocarbons, propane and propene, and two C<sub>5</sub> hydrocarbons, n-pentane and isopentane; (2) to calculate densities from equations, assuming that the sum of liquid and vapor densities is a linear function to tem-

perature; (3) to prepare three separate tables in different units; and (4) to cover the temperature range —50° to 140° F. A limited number of copies of the circular are available, without cost, upon application to the National Bureau of Standards.

**Semiautomatic Pressure Control in Low-Pressure, Low-Temperature Laboratory Fractionation**—D. R. Douslin and W. S. Walls. "Industrial and Engineering Chemistry," Annual Edition, Jan., 1944, pp. 40-42. This paper describes a control device developed in the Phillips Petroleum Co. laboratory from materials usually available, which provides a simplified means of semiautomatic control for low-pressure, low-temperature laboratory fractionating equipment, without sacrificing excellence of control or ease of operation. Its outstanding attributes are simplicity of construction and low cost. The device may be used with good results on either the standard low-temperature laboratory fractionating column or the Podbielniak Heli-Grid type; and if these two types of columns are connected to the same manifold, the control may be shifted from one column to the other simply by moving the nitrogen flask. No other changes in the pressure control mechanism are necessary. Described and illustrated.

**The Mass Spectrometer for Gas Analysis**—J. A. Hipple and H. K. Dralle. "Petroleum Refiner," Dec., 1943, pp. 93-96. In this article the authors describe the instrument and its operation. Some analysis of hydrocarbon blends are given.

**List of Inspected Gas, Oil, and Miscellaneous Appliances** — Dec., 1943. Published by the Underwriters' Laboratories, Inc.

## Family Loyalty Builds Family Profits

SINCE the days of its modest beginning in 1935—days when the sale of butane gas east of the Mississippi River was just taking hold—W. G. Petty and Son, of Memphis, Tenn., have steadily risen to a position of first-rank importance as a supplier of butane gas systems in that section of the country.

For the first year of its existence, the company was compelled to haul gas from London, Texas. However, as the number of consumers gradually increased, and skeptical business men came to appreciate the economy, safety and successful application of butane, Mr. Petty was enabled to build his own plant, and today maintains six bulk or storage plants.

This company has made several installations in the heart of Memphis. One defense plant is being heated with eight 1000-gal. plants, another with two 1000-gal. plants, and there are at least 12 other installations in defense plants around Memphis. In addition, 36 cotton gins are being serviced with driers and equipment.

The business is owned and operated under the name of W. G. Petty and Son. Employed in the Memphis office are W. M. Petty, a brother, and Miss Mattie Cannon, both of whom have been associated with the company from its inception. J. D. Drake and Miss Theresa Williamson are also employees of long standing.

At Bells, Tenn., E. E. Pace and



W. G. Petty & Son, Memphis, Tenn., move in butane tank for underground installation (see excavation) for large industrial concern. At the left is shown a tank truck waiting to fill the supply tank after it is set, and standing beside the tank truck are W. G. Petty, in center, with his brother, W. M. Petty, at right, and J. D. Drake at left.



*The Industry Looks to the Leader  
For Better Tank Values!*

A Good Point to Remember—Economy Butane Systems are safety engineered. You can rely on EVERY Economy System being built absolutely in strict accordance with the A.S.M.E. Code!

**Buy War Bonds!**

**DALLAS AND TANK**  
**WELDING COMPANY, INC.**  
201-5 W. COMMERCE ST. DALLAS, TEXAS



Mrs. Pace manage that division and at Senatobia, Miss., the office is managed by another brother, J. D. Petty, who is assisted by E. C. Henshaw. The Cleveland, Miss., branch is operated by C. P. House, whose wife assists him, and directs the office. Mr. House is also assisted by Hugh Kearney.

This small group of people have worked together, and well, for many years. "Their loyalty," Mr. Petty states, "has made possible a good portion of whatever success we now enjoy."

Although Mr. Petty is particularly proud of the company's growth, he has been consistently careful not to let it mushroom out beyond his ability to serve. For this reason, very few installations are further than 35 miles from any one distribution point. For this reason, too, the company has survived the war-time freezing of installations and equipment.

Everything possible is being done to

maintain and to better service—to make equipment last for the duration—and, especially, not to add to the present drain on materials vital to the war effort.

### Revised Schedule Affects Liquefied Petroleum Gases

An important change in the OPA regulations governing petroleum and petroleum products at all levels of distribution except retail, became effective on Feb. 19.

The original schedule, "Revised Price Schedule 88," has been redesignated as "Maximum Price Regulation 88," and is now limited to cover gasoline, kerosene, fuel oils, diesel and tractor fuels, diesel oils, naphthas, solvents, and liquefied petroleum gas.

Lubricating oils, greases and similar petroleum products were removed from the schedule and placed under a new regulation known as MPR-510.

Shown here are Lieutenant Commander J. R. Heinicke and Lieutenant R. B. Kleinhans, formerly engineers with The AGA Testing Laboratories in Cleveland who are now with the navy, discussing recent research developments with K. H. Flint, Laboratories' assistant chief research engineer.



# LEVEL CONTROL

- ANNUALLY since 1936, conventions of the Natural Gasoline Association of America have devoted one portion of every program to the exhibition and discussion of original operating ideas which have been developed by members for doing any job within their province in a cheaper, safer or more efficient way. Cash prizes are awarded for "kinks" judged the best.

One of the prize winners in the past was Noel L. Dalton, repairman for Phillips Petroleum Co., Edmonds, Okla. His entry was a "liquid level control," which is described in the accompanying article.—Editor.

**T**HIS control eliminates the use of a packing gland and is designed for the purpose of obtaining more accurate control at a lower cost for construction and maintenance. It is actuated by the increase and decrease of weight of the liquid being controlled as the level rises and falls in the reservoir "A." The device is designed to eliminate the effect of friction in liquid level control in order that the slightest variation of the liquid level may give a corresponding change of pressure to the diaphragm of the motor valve.

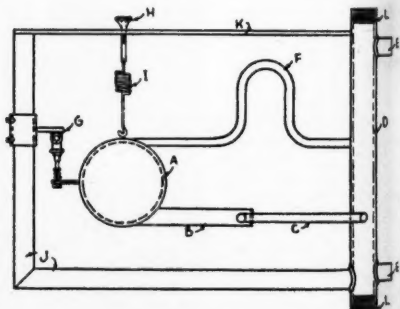
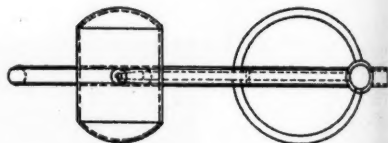
The elimination of the packing gland is of particular advantage in controlling the level of high gravity gasolines under high pressures. There is no float ball to collapse or leak. There are no threads or gaskets to leak. It can be constructed more cheaply than a kidney float. When made of the proper materials the maintenance will be negligible.

The level control is connected to the tank by 1½-inch connections from the threads marked "L" so that the desired level of the liquid will be near the center of reservoir "A." As the level rises in the pipe "D" it equalizes in reservoir "A," increasing the weight of the reservoir, causing it to

lower, thereby operating the pilot valve assembly "G." As the level lowers in the pipe "D" and in the reservoir "A," the weight decreases allowing the reservoir "A" to be raised by spring "I," thereby operating the pilot assembly "G." The one-half inch copper tubing "F" and "C" connecting the reservoir "A" with the pipe "D" is flexible enough to give the desired movement to more than cover the entire range of the control.

In order to make adjustments to compensate for the difference in weight of different liquids on which the control may be used, such as water and gasoline for instance, an adjusting nut "H" is provided. This nut may also be used to change the level to any desired position, within the range of the control. The pilot valve assembly "G" is of the variable type, requiring little power to operate it.

On installations where process lag is encountered, this control has an advantage in the fact that there is no



Liquid Level Control.

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# RELIANCE REGULATORS

ARE DESIGNED AND TESTED  
TO MAKE L-P GAS BEHAVE



A Reliance Regulator will make gas behave in every conceivable regulating application in the liquid petroleum industry. The wide range of sizes with many variations of Reliance Regulators provide positive and uniform control for all pressure conditions in L-P gas lines.

Since the birth of the L-P gas industry, Reliance Regulators have been preferred for their originality of design, by which positive lock-up and absolute control of

steady outlet pressure are assured under variable loads and inlet pressures.

Simplicity reduces installation costs, minimizes maintenance service, reduces size and weight and saves metal for the war effort. To make your L-P gas system behave, install Reliance Regulators.

BULLETINS ARE AVAILABLE ON THE COMPLETE LINE OF APPROVED RELIANCE REGULATORS.

## AMERICAN METERS

# RELIANCE REGULATORS

RELIANCE REGULATOR CORPORATION  
1600 HERBODIN AVENUE ALHAMBRA, CALIFORNIA

friction to retard its action. For example: Controlling the amount of reflux in a fractionator column by controlling the amount of cooling water through the overhead condenser with a liquid level control on the reflux tray.

When using this level control on more viscous liquids such as oil, it will be necessary to use a suitable Sylphon bellows in place of the copper tubing "F" and "C." In all installations where the pressure on the liquid being controlled is below 100 pounds the Sylphon bellows would probably work better than tubing.

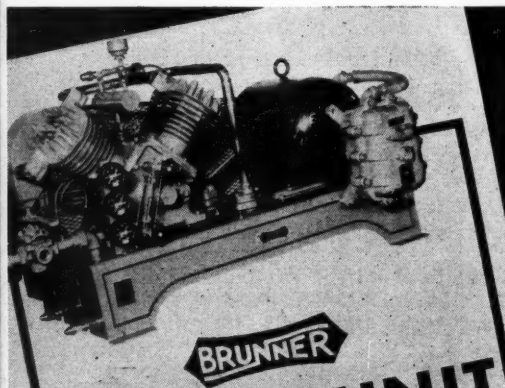
### No Ratings Required For Sales of Non-Rationed Stoves

Sale of hot plates for household use, portable ovens and any other items which are exceptions to the

Office of Price Administration's rationing of cooking appliances and heating stoves designed for domestic use, no longer requires authorization from the War Production Board. Previously A-10 or better rating was required.

This change was made effective by an amendment to Order L-23-c, which formerly restricted sale of domestic cooking appliances and domestic heating stoves to orders which were either (1) rated A-10 or better or (2) covered by an OPA rationing certificate. Sale of those items rationed by OPA is still subject to rationing certificate.

Action was taken to comply with the recent removal of sales restrictions on a majority of plumbing, heating and cooking equipment from Order L-79 which controls sale and transfer of such equipment.



**BRUNNER**

## LP GAS UNIT

COMPRESSOR ASSEMBLY THAT WILL PUMP VOLATILE LIQUIDS AND SALVAGE THEIR RESIDUAL VAPORS

**NEW BOOKLET**  
tells how to SALVAGE IT!

**BRUNNER MANUFACTURING COMPANY**  
UTICA, NEW YORK, U. S. A.

## Save from 500 to 1000 lbs. of LP Gas Vapor from each Tank Car

Conservation of petroleum products is a war necessity. The vapor left in the tank after liquid petroleum has been transferred from a tank car or truck equals from 500 to 1000 lbs. of LP Gas! This booklet... probably the most comprehensive ever prepared... tells how this vapor can be salvaged with the Brunner LP Gas Unit. This unit for gas transfer and recovery is outstanding in speed, efficiency and low cost. The savings in gas alone will pay for the unit after a few unloadings. In addition, the time required for unloading is greatly reduced. Brunner Manufacturing Company, Utica, N. Y., U. S. A.

### Mail This Coupon TODAY!

Brunner Manufacturing Company, Utica, N. Y., U. S. A.

Send me the booklet describing the Brunner LP Gas Unit and containing diagrams, tables and valuable information on the handling of liquid petroleum gas.

Name

Address

City and State

# THE TRADE

Joseph Becvar, Sr., 73-year-old director of the development department at Grand Home Appliance Co., Cleveland, Ohio, is celebrating his 50th year as a stove designer.

Born and raised in Cleveland, Mr. Becvar started in the trade in 1894 with the Gobel Pattern Co. In those days he made but one scale drawing per stove, while in today's new Grand Compact Cooker over 80 drawings were required. At that time the main selling point of the stove was its ornamentation, while in today's the stressed points are cooking results, cleanability, and convenience. Among Mr. Becvar's prized possessions is a scrap book in which he has kept prints of all the stoves he has designed. They number 45 different models.

Faced with WPB restrictions, Mr. Becvar designed the new Grand Compact Gas Range without the use of substitute materials and meeting all

requirements set by the American Gas Association. According to D. L. Edelmuth, vice-president of the company, the new Grand was expected to be ready for shipment in March.

Servel, Inc., moving into the third phase of the postwar action program on the all-year gas air conditioner, during February held a training school at the factory for application, service and sales engineering representatives of gas utility companies from all over the country. The more than 50 engineers who were at the Servel plant in Evansville, Ind., came from such widely divided sections as Omaha, Boston, Dallas, and Miami Beach.

"The purpose of this series of meetings," John K. Knighton, sales-manager of Servel's Gas Air Conditioning Division, said, "is to thoroughly acquaint members of the gas industry with the problems of application, installation, and servicing of the new unit."

The first phase of Servel's air conditioning program for the postwar era started last June when Mr. Knighton



Joseph Becvar, Sr. (center), Grand Home Appliance Co., Cleveland, describes the war-time range to radio audience and studio attendants on the "What's Cookin'" program on a national hookup.

# CLOW *Gasteam* RADIATORS

## Combine

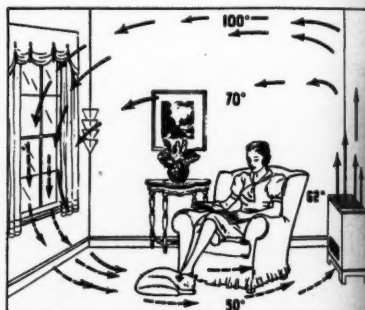
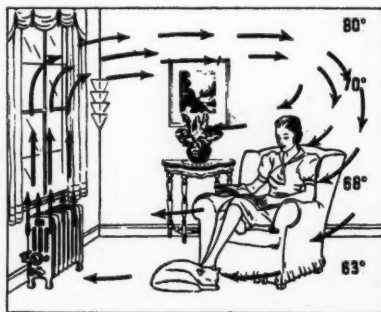
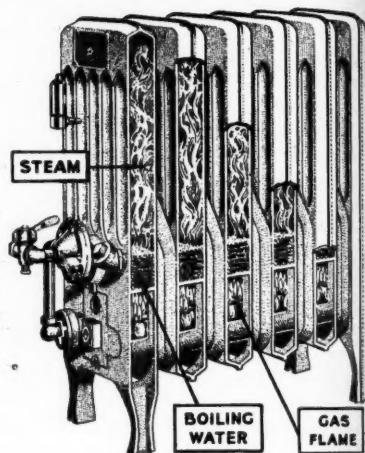
THE SUPERIORITY OF STEAM  
RADIATOR HEATING WITH  
THE FLEXIBILITY OF ROOM  
HEATERS.

1878



1944

*The Radiator That Makes Its  
Own Steam Heat With Gas*



Clow Gasteam Radiators may be placed beneath windows or along outside walls so that the cold air is heated as it enters the room, thus preventing cold floor drafts.

*Write for Descriptive Folder*

## JAMES B. CLOW & SONS

201-299 N. TALMAN AVENUE, CHICAGO, ILLINOIS



ton, Louis Ruthenburg, president of Servel, Inc.; Geo. S. Jones, Jr., vice-president in charge of sales, and other Servel executives held a series of six meetings from coast to coast to introduce the company's plans for the postwar future of gas air conditioning.

The second phase of the plan was a series of meetings which were started last fall and are still continuing. These regional meetings which have been held in 33 different cities have been attended by 1378 gas company executives. During April, eight more of these meetings will be held on the West Coast.

Fisher Governor Co. announces a new simplified "Question and Answer" bulletin containing a summary of Federal Government Orders affecting the purchase of new LP-Gas equipment and the maintenance and repair of existing LP-Gas equipment. It is the result of a careful study and analysis of these orders and regulations as of March 15, 1944.

The bulletin is written in "every

day English" and is designed to help the dealer and distributor solve those daily problems of how to procure new equipment as well as repair and maintenance materials. It is available without cost. Write to Fisher Governor Co., Marshalltown, Iowa, requesting your copy of Bulletin 693.

Surface Combustion, Toledo, Ohio, has just released an illustrated bulletin which describes the "whirl flame" operating principle of its new type "Janitrol" high altitude aircraft heater.

The bulletin was published to furnish information essential to complete understanding and appreciation of the revolutionary principles embodied in the advanced type of heating represented by the aircraft heater. It is now used on army and navy approved aircraft operating in all theaters of war.

In addition to giving operation and installation data, the bulletin lists the heater's many important features.

It is pointed out that the Surface



When employees of The Bryant Heater Co., Cleveland, went far over the top in subscribing for extra bonds in the Fourth War Loan, this General Sherman tank paid them a "thank-you" visit. Bryant employees are engaged in production of the bogie wheel assembly for tanks and other war equipment.



## USE SINCLAIR BUTANE-PROPANE

Playing a vitally-important role in the war effort are LP-Gases. "Spot Service" keeps mechanized equipment advancing on global battle-fronts. When equipment breaks, a mobile repair unit, LP-Gas equipped, races to the scene . . . ready for welding, metal cutting or anything a white-hot flame can remedy.

At home, in spite of wartime limitations, the methods of using this versatile fuel are constantly increasing. LP-Gases are so easily transported, so controllable, so convenient to use for so many widely varied purposes.

When peace comes, Sinclair LP-Gases, in adequate quantity, will continue to serve you with the same adaptability, portability, and safety; the same efficiency, speed and economy which is now supplying lifeblood to the veins of modern mobile warfare.

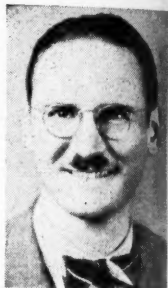
*Protect your fuel requirements  
by contracting with*

### **SINCLAIR PRAIRIE OIL COMPANY**

Liquefied Petroleum Gas Division  
Sinclair Bldg. Tulsa, Oklahoma

Combustion "Janitrol" heater has been flight tested at 37,500 ft. and laboratory tested under simulated conditions at over 50,000 ft. The heater is said to operate at the high densities found at sea level and low densities at 45,000 ft. Emphasis is given to the fact that the heater flame will not blow out due to the revolutionary design.

General Controls Co., Glendale, Calif., manufacturers of pressure temperature and flow controls, announces the opening of a new branch office at 376 Nelson St., S. W., Atlanta 3, Ga. Complete factory sales and service to customers in Atlanta are under the direction of Branch Manager Robert W. Allen.



R. W. ALLEN

Mr. Allen was born in Atlanta in 1904 and is well and favorably known throughout the South. He is a graduate electrical engineer, educated at M. I. T. and Georgia Tech, and has had an unusually broad sales and service experience in the related instruments and control industry. Specializing in technical and industrial sales, he covered the southern states for 14 years.

The Superior Valve & Fittings Co., of Pittsburgh, Pa., recently opened an Eastern district office. It is located at 60 East 42nd St. in New York City, and its purpose is to facilitate the handling of business with commercial customers and various government agencies.

Charles R. Logan, who has repre-

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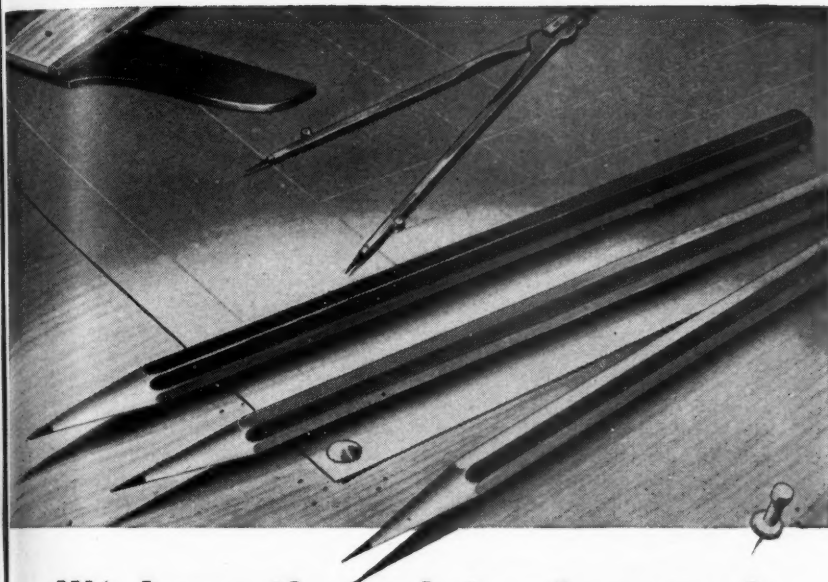
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## We keep the points sharpened ...on our postwar planning pencils

It is not enough to carefully work out a postwar plan, roll it up, tie a string around it... and put it on a shelf for the duration.

Estate's plans for the postwar period are being continually revised, re-worked, improved and expanded as new information becomes available. And out of this continuing study, you may be sure, a final plan is coming that will enable Estate... and Estate dealers... to start out in front.

That's what Estate dealers naturally expect. For being first with the latest improvements has always been an Estate custom. Estate was first with the cabinet

type circulating home heater, first with the table top range... first with many other major improvements.

Estate will continue its hundred-year-old record of "firsts" when it becomes possible to turn our postwar plan into action. Its up-to-the-minute thinking will reveal new product developments, sound advances in merchandising methods that will give Estate dealers a bigger edge than ever over competition.

Meanwhile, Estate maintains a constantly increasing output of the materials necessary for our fighting men... materials that are helping to hasten the day of Victory.

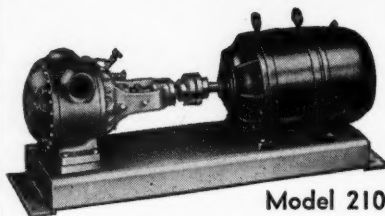


# ESTATE

The name to remember in cooking and heating appliances

THE ESTATE STOVE COMPANY, HAMILTON, OHIO • HOUSE FOUNDED IN 1842

# SMITH BUTANE-PROPANE PUMPS



Model 210

## STANDARD EQUIPMENT

With Leading LPG Engineers

**MODEL 210 (Above)** • Capacity 50 GPM at 1750 RPM for direct connecting to electric motor.

**MODEL 211** • Capacity 50 GPM at 500 RPM for tank truck direct connected to power take-off.

**MODEL 300** • Capacity 100 GPM at 1750 RPM for direct connecting to electric motor.

**MODEL 301** • Capacity 100 GPM at 500 RPM for large transport service direct connected to power take-off drive.

**BALANCED GEAR CONSTRUCTION  
RELIEVES BEARING LOADS**

**FLUID SEALED PACKING BOX  
ELIMINATES HAZARDOUS LEAKS**

**250 LBS. WORKING PRESSURE**

Prompt Delivery on  
Complete Assemblies

*Write for literature and prices.*

**SMITH Precision Products COMPANY**  
1135 MISSION ST. SOUTH PASADENA, CALIF.



CHAS. R. LOGAN



F. NEIL ROBSON

sented the company in the Eastern district for more than five years, will be in charge of the new office, and F. Neil Robson, a member of the factory sales office for the past two years, will assist Mr. Logan.

Dolph Jansen, Jr., assistant sales promotion manager of Servel, Inc., Evansville, Ind., has recently resigned to become associated with the Zenith Radio Corp. as assistant sales manager of their newly formed radionics hearing aid division.

Mr. Jansen came with Servel in 1935 in their New York office, and in 1937 was transferred to Evansville where his headquarters have been up to his present change.

Butler Manufacturing Co., builders of LP-Gas home systems and transport and storage tanks, was awarded the Army-Navy "E" on Feb. 24. Presentation was made in Galesburg, Ill.

Willard E. Colvin, Geo. D. Rope, representative who worked in Pennsylvania with eastern manager W. Foster, is now in the United States armed forces.

Mr. Colvin is a member of the 243rd Engineering Combat Battalion, Camp Breckenridge, Ky.

OBSON

Eastern  
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NE News APRIL—1944



## A GUY CAN DREAM, CAN'T HE ?

Thousands of Americans today are thinking and talking about their dream homes . . . looking forward to the day when they can start building them. And the famous Bryant pup is encouraging them . . . reminding them in national advertisements of the advantages of gas heating.

Will you have something interesting to offer prospective homeowners in your community? You will if you suggest installation of Bryant gas heating. People will know that yours is a dependable product. Bryant's national advertising will have paved the way. Bryant's reputation as pioneer of gas heating for homes will give you the edge on competition.

Plan to sell Bryant gas heating in your territory. There'll be real profit for you in helping make the dreams of home planners come true. The Bryant Heater Company, 17825 St. Clair Ave., Cleveland 10, Ohio . . . One of the Dresser Industries.

**bryant**  
**GAS**  
**HEATING**



Let the pup be furnace man



## BRILLIANT FIRE 3541

VENTED CIRCULATOR with unobstructed radiant heat . . . that's the Brilliant Fire Model No. 3541, the big 3-Way Economy model, for all gases, now in production.

AVAILABLE under WPB and OPA Regulations for civilian use.

WRITE TODAY for Bulletin 460 listing full line of BRILLIANT FIRE Gas Heaters . . . enclosed circulators, radiant heaters, wall models, logs, etc. . . . together with prices and discounts.

*The* **OHIO FOUNDRY  
& MANUFACTURING COMPANY**

STUEBENVILLE

Est. 1846

OHIO

## AGA Bulletin No. 20 to Cover 100% Primary Air Burners

New and valuable data on design and application of gas appliance burners will be presented in Research Bulletin No. 20, shortly to be released for publication by the Committee on Domestic Gas Research of the American Gas Association. Extensive study has been devoted to the fundamentals of the burner design as a part of the extensive Domestic Gas Research program now in progress at the Association's Laboratories. Three research bulletins previously published covered conventional Bunsen type burners. Those utilizing all air needed for combustion as primary air are now similarly treated.

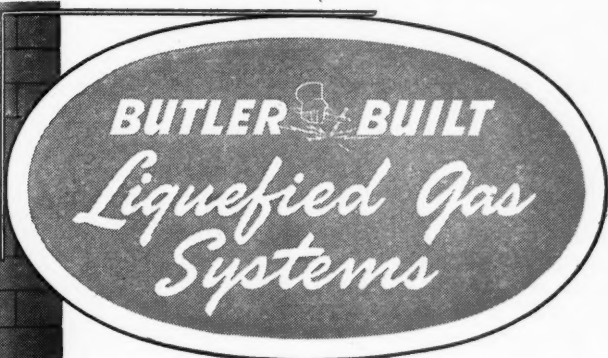
### Chief Advantages Listed

Chief among the advantages of the burners discussed in this bulletin are reduced combustion space, greater heat liberation and higher rate of heat transfer. Design features which will best accomplish desired results are fully discussed. These apply to burners operated on low gas pressure commonly employed, as well as those supplied for use under higher pressures.

A chapter is devoted to performance of various small burners employing all air as primary air. They are considered from the standpoint of their application to gas range sections. They should be capable, however, of application to other types of domestic gas appliances as well. Experimental results clearly show possibilities of high efficiencies and good heat distribution. For gas range application particularly, the advantages offered by the use of such burners deserve special attention.

BUTANE-PROPANE **NEW PRI**





*Here's the sign your customers will be looking for...Postwar!*

No dealer wants to be caught postwar with his signs down. Nor is it any better to be caught with the wrong sign up.

So before you tie up on Liquefied Petroleum Gas Equipment, get full details on Butler's entirely new system.

This information is being compiled and will be ready for

you in ample time before conditions of war will permit the mass production we have planned.

In the meantime, Butler advertising in farm papers will continue to remind your customers

that Butler is the L. P. G. System to look for when we can again supply the market.



**BUTLER MANUFACTURING COMPANY**

1219 EASTERN AVE., KANSAS CITY 3, MO.

**BUTLER BUILT**  
LIQUEFIED PETROLEUM GAS

HOME SYSTEMS, TRUCK AND TRAILER TRANSPORT TANKS AND BULK STORAGE TANKS

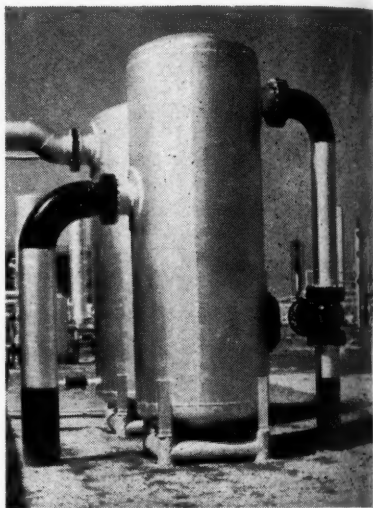
# High Octane Aviation Gasoline Exceeds 1944 Military Requirements Goal

**P**RODUCTION of 100-octane aviation gasoline today is more than four times greater than production in the early months of 1942, and within a few months will be about eight times greater, the Petroleum Administration for War announced recently.

PAW also said that present production exceeds the 1944 goal of ultimate requirements as set by military and government authorities in the spring of 1942.

At the same time PAW released the first list of new 100-octane plants and their location.

Since Dec. 7, 1941, PAW and the oil industry have initiated 72 major 100-



Accumulators and scrubbers in an East Texas gasoline plant equipped for high butane recovery from casinghead gas.



TiteSeal gasket and joint-sealing compound prevents leakage of all L P gases and liquids regardless of heat, cold, vibration or pressure.

TiteSeal always remains plastic and always permits easy disassembly.

ALWAYS SPECIFY

## TiteSeal

MANUFACTURED BY

**RADIATOR SPECIALTY COMPANY**

CHARLOTTE 1, NORTH CAROLINA

BRANCHES: LOS ANGELES, CALIFORNIA • TORONTO, CANADA

octane construction projects. Of these 32 have been completed, in spite of delays in getting the necessary materials, and the remaining 40 will be completed within four months. An additional 22 domestic plants have been scheduled in PAW's 1944 program, and engineering work on these has been underway for some time.

Altogether, it was stated by Deputy Administrator Ralph K. Davies, approximately \$900,000,000 is being invested in production facilities for 100 octane, the program considerably exceeding the synthetic rubber program in size, scope, and cost. Distinguishing the program from most other wa

# "FOR NOW AND EVERMORE!"

## HYDRO-GAS CO., OF WEST FLORIDA

9 E. GREGORY ST.

PENSACOLA, FLORIDA

Tappan Stove Co.,  
Mansfield, Ohio.

August 23, 1943

Gentlemen:

Please advise us at once what models you will have available for rationing, what delivery may be expected and quotations.

Since appliances have been frozen and service is all that we have delivered, we have had an opportunity to really compare the various makes that we have sold. It perhaps will be nothing new for you to hear, but we have had practically no service calls on any Tappan installations and that cannot be said of any of the other makes we have handled.

If it is possible, we would like to now make arrangements to handle Tappans exclusively for now and ever more. We do not contemplate any great degree of business until the war is over but want to be ready to hit the ball as soon as possible.

Thanking you kindly for your past services, we are,

Very truly yours,  
HYDRO GAS CO. OF WEST FLA. INC.

*Don. D. Stow*  
Don. D. Stow, PRES.

Tappan keeps at it all the time ... bringing the Tappan dealer continuous national advertising ... interesting women in buying a postwar Tappan from you.

WRITE ABOUT A POSTWAR TAPPAN DEALER FRANCHISE. THE TAPPAN STOVE COMPANY, MANSFIELD, OHIO.

You'll find Tappan Ads in

LIFE • McCALL'S  
BETTER HOMES AND GARDENS  
LADIES' HOME JOURNAL  
WOMAN'S HOME COMPANION  
SUCCESSFUL FARMING  
THE SATURDAY EVENING POST

## TAPPAN Gas Ranges



"Certified  
Performance"



For 63 years makers of quality ranges—100% in war work now

APRIL—1944

*To All*  
**NATURAL GASOLINE MEN**  
*Greetings*

from the

**NATURAL GASOLINE SUPPLY MEN'S ASS'N.**

We Are Looking Forward to Seeing You at the  
**TWENTY-THIRD ANNUAL CONVENTION**

of the

**NATURAL GASOLINE ASSOCIATION OF AMERICA**

**April 12-14, Baker Hotel, Dallas, Texas**



**MEMBERS OF THE  
NATURAL GASOLINE SUPPLY MEN'S ASSOCIATION**

The American Rolling Mill Company  
The Bristol Company  
The Brown Instrument Company  
BUTANE-PROPANE News  
Chicago Bridge & Iron Company  
Clark Brothers Company  
Continental Supply Company  
Cooper-Bessemer Corporation  
Joseph A. Coy Company  
W. H. Curtin & Co.  
Elliott Company  
The Fisher Governor Company  
The Foxboro Company  
Frick-Reid Supply Corporation  
Gasoline Plant Construction Corporation  
Goulds Pumps, Inc.  
D. W. Haering & Co., Inc.  
Hanlon-Waters, Inc.  
Hercules Motors Corporation  
Ingersoll-Rand Company  
Warner Lewis Company  
The Marley Company, Inc.  
C. A. Mathey Machine Works  
Mid-Continent Engineering Company  
Merco-Nordstrom Valve Company  
Metric Metal Works

Midwest Piping & Supply Company  
Moorlane Company  
National Petroleum News  
National Tank Company  
Naylor Pipe Company  
The Oil & Gas Journal  
Parkhill-Wade  
The Petroleum Engineer  
Petroleum Engineering, Inc.  
Petroleum Refiner  
Pittsburgh Equitable Meter Company  
The Refinery Supply Company  
Southern Supply Incorporated  
Stearns-Roger Manufacturing Company  
Taylor Instrument Companies  
Tulsa Boiler & Machinery Company  
Vinson Supply Company  
Vortex Manufacturing Company  
Walco Engineering & Construction Company  
Walworth Company  
Westcott & Greis, Inc.  
Woobank Pump & Machinery Company  
World Petroleum  
Worthington Pump & Machinery Corporation  
Wyatt Metal & Boiler Works  
John Zink Company

production projects, which have been financed principally by the government, more than 75% of this investment is being made by the oil companies and the remainder by the Defense Plant Corp., Mr. Davies said.

In addition to the complete plants which have been or are being built, PAW has initiated more than 200 minor projects for changing or expanding existing facilities to increase 100-octane production.

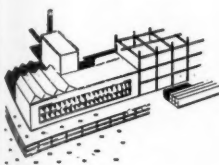
The projects vary from small conversion jobs costing less than \$10,000 to complete plants, costing several million, and include two complete refineries. The new plants which in nearly all cases are being erected within existing refineries are scattered throughout the country, with the heaviest concentration in the Southwest where 40% of the plants have

been or are being built at the present.

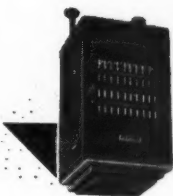
Discussing the program, Mr. Davies said: "Both large and small refiners are participating in the program. Under the guidance of PAW, patents and engineering knowledge were pooled and in many cases engineering staffs of large companies which had developed processes for making 100-octane were loaned to companies which before the war had not made the product.

"When the 1942-43 program is completed, 126 domestic refineries will be contributing to the production of 100-octane. Of these, 72 will make the completed product, while others will make components of the super fuel. Only 22 refineries in the United States were making 100-octane on Jan. 1, 1942."

1. PLANT EXPANDS—OLD HEATING SYSTEM IS TOO SMALL



2. REZNOR UNIT HEATERS EASILY INSTALLED



3. RESULT—AMPLE HEAT WITH MINIMUM MAINTENANCE



● When you expand your plant or move into additional rooms in an existing building, it may not be economical to install new boilers and new piping . . . yet you must have heat.

With Reznor Unit Heaters, you do not need expensive equipment. Each heater is a self-contained package which can be placed quickly and easily where it will do the most good.

For large areas, you probably will need several heaters, but in small areas, one Reznor Heater usually is sufficient. Our salesman will be glad to give you his recommendations. Reznor Unit Heaters can be suspended or placed on the floor. Several different sizes are available to take care of all conditions.

Send for the catalog and make your choice.

## REZNOR

REZNOR MANUFACTURING CO., 304 JAMES ST., MERCER, PENNA.

# PRODUCTION AND DISTRIBUTION OF LP-GASES \* IN UNITED STATES

(Thousands of Gallons)

	Dec. 1943	Nov. 1943	Dec. 1942	Jan. 1943	Dec. 1942
<b>Production:</b>					
Isobutane at natural gasoline and cycle plants	18,186	17,346	8,946	170,184	101,682
Other LP-Gases at natural gasoline and cycle plants	73,752	72,240	69,342	824,796	671,874
Total .....	91,938	89,586	78,288	994,980	773,556
<b>Demand:</b>					
Used at refineries					
LP-Gases and benzol.....	41,412	39,858	30,828	451,626	390,390
LP-Gases for fuel.....	41,202	39,144	34,944	407,358	302,190
Total .....	82,614	79,002	65,772	858,984	692,580
<b>Stocks (End of Month):</b>					
LP-Gases .....	45,024	48,090	23,646	45,024	23,646

\* Liquefied refinery gases not included. Extracted from November 1943 natural gasoline report of U. S. Bureau of Mines.

# T-80



T-80 Series Thermostats for use with  
all B-60 Series Gas Heating Controls

# TRIMTHERM

GENERAL CONTROLS THERMOSTAT OF TOMORROW

## SURFACE MOUNTING

With flush appearance; no  
recess in wall.

## 1/2° F. DIFFERENTIAL

Without false heat input.

## UNOBTRUSIVE

Extends but 13/16" off the  
wall.

## CORRECT DESIGN

Harmonizes with vertical  
walls.

## PLASTIC BASE

Thermally isolates thermo-  
stat from wall.

## VISIBLE MARKINGS

All calibrations easy to  
read.

## KNOB ON COVER

No wall smear.

Write for  
Catalog 52

# GENERAL CONTROLS

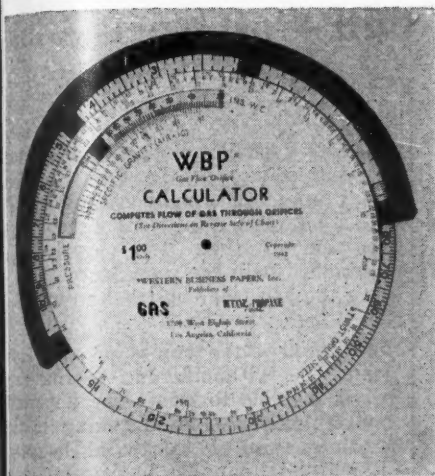
801 ALLEN AVENUE • GLENDALE 1, CALIF.

BRANCHES: Boston, New York, Philadelphia, Cleveland, Detroit,  
Denver, Chicago, Dallas and San Francisco



# GAS FLOW ORIFICE CALCULATOR

Invaluable to LP-Gas Engineers, Shop Men, Domestic Appliance Service Departments, LP-Gas Appliance Manufacturers, and All Others Who Need to Check or Determine LP-Gas Orifice Sizes.



- Easy to Use and Carry
- No Need for Calculations

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Ever had to convert an appliance from manufactured or natural gas to LP-Gas and needed to know what orifice size to install? Ever had to estimate how much gas a burner could handle? Ever had to convert B.t.u. per hr. to cu. ft. per hr., or vice-versa? Ever had to know the B.t.u. input load of an appliance or industrial burner? With the Gas Flow Orifice Calculator you can quickly and accurately work out all these and many other problems.

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15-ins. water pressure. Determines the flow of orifices from sizes 1 to 75 number drills, from sizes A to Z in letter drills, and from sizes 2/64 to 32/64 in fraction drills.

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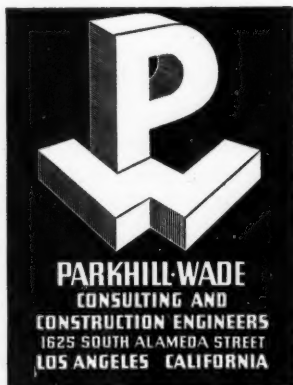
Gentlemen: Please send me . . . . . W.B.P. Gas Flow Orifice Calculators for which I am enclosing my check (or money order) for \$ . . . . .

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APRIL — 1944

## Refineries and Plants

For Recovery of  
Isobutane  
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That Stands  
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# McNAMAR

Tanks for  
most all L.P.G.  
requirements

**McNAMAR**  
**Boiler and Tank Co.**

Tulsa, Okla.

Salem, Ill.

## LP-Gas Meets Glass Plant Demands

SEVERAL large glass manufacturing plants in the San Francisco Bay area are now depending on LP-Gas standby equipment for a large portion of their fuel supply. The standby facilities were installed during the past year by the Ransome Co. of Emeryville, Calif.

Although the names of the plants must be withheld, due to the war it is possible to relate the important part that LP-Gas is taking in the maintenance of this vital industry. With metal supplies in demand, glass manufacturing is another "must" industry. In each case plant output is greatly increased and must be maintained.

The plants operate on natural gas a large portion of the time; however, butane is now used on 24-hour schedules for several weeks at a time. When in operation, each of the plants will use more than 1000 gals. of butane every hour, making the supply problem a big one when the plants "change-over" for any length of time.

Glass manufacturing places a great demand on any fuel. In order to melt the sand used in glass manufacturing a temperature of 2800°F. must be maintained. Butane has proved an excellent fuel for this job, giving a maximum heat at a minimum cost.

### Dates Changed For Oil Compact Meeting

Dates of the New Orleans quarterly meeting of the Interstate Oil Compact Commission have been changed to Monday and Tuesday, April 3 and 4.

Headquarters will be at the Roosevelt Hotel, where committee meetings and general sessions will be held.

BUTANE-PROPANE News

## Steel Jackets Asked For Water Heaters

The plumbing and heating water heater industry advisory committee has recommended to the war production board that production of steel jackets for water heaters and copper coils for side arm water heaters be permitted as soon as material can be spared from war production, WPB reports.

In making these recommendations, members of the committee said substitute water heater jackets (made of paper and asbestos sheets) and cast iron water coils for side arm heaters have not proved satisfactory in all cases.

A representative from WPB's copper division told committee members that copper was as scarce now as it

was a year ago and that no changes in present restrictions could be made now.

## Purchasers of New Trucks Must Get Use Approval

All persons who are planning to purchase trucks placed on sale by army salvage officers as no longer suitable for military use are warned to consult their ODT motor transport district office before bidding.

The ODT warning on purchases of army trucks applies also to used trucks of any kind. Such a purchase should not be made until the prospective buyer makes certain that a Certificate of War Necessity, required for operating any kind of commercial motor vehicle, will be issued by the ODT for the type of service in which the truck is to be used.

# TANKS

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## NEW AMERICAN TRUCK TANK

**Speeds Up Deliveries from Bulk Plants  
to Consumer**

New American Truck Tanks afford faster deliveries to Butane-Propane users. Unit shown above recently delivered to The California Butane Company has 1685 gallon capacity and is latest development by American Pipe & Steel Corporation in truck tanks. Extreme care in design has resulted in proper load distribution to get maximum tire wear. For complete details regarding your tank requirements call:

**A M E R I C A N**

PIPE & STEEL CORPORATION

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## Fire Extinguishers Made Now Bear Special Label

There is a certain amount of confusion concerning the distinction between fire extinguishers bearing standard Underwriters' Laboratories approval and those bearing the Laboratories "EAS" approval, according to the Safety Research Institute, Inc., New York City.

Standard approved extinguishers bear the usual Underwriters' Laboratories label, which reads "Underwriters' Laboratories Inspected," and gives the serial number of the label and pertinent information on the classification of the extinguisher. That label signifies that the unit conforms to the Laboratories' "pre-war" specifications covering types of materials, details of construction, performance requirements, etc. Such extinguishers are now available only to very high priority holders.

### Performance Considered First

When war started, restrictions on the use of critical materials made it necessary for the manufacturers of standard extinguishers to develop new models using non-critical materials. The solution to this problem was undertaken in cooperation with Underwriters' Laboratories, and a realistic decision was made to sacrifice durability in favor of performance.

"Emergency Alternate Specifications" were developed which permit the use of substitute materials, and extinguishers produced under these specifications bear an "EAS" approval label—that is, the Underwriters' Laboratories inspection label has the letters "EAS" added, and also the year of manufacture.

Translated into practical terms, this label signifies that the unit on which it appears will perform as

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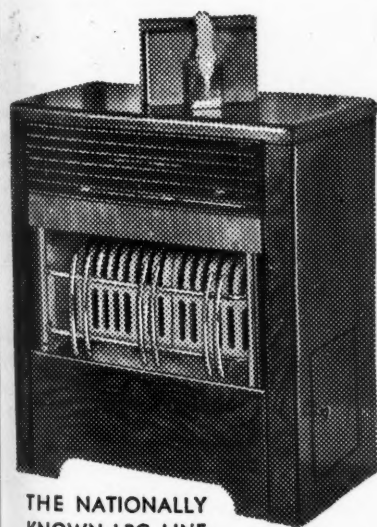
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- **AIR-COOLED CABINET**  
Patented Safety Feature.
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Automatic Lighting Is Safer.
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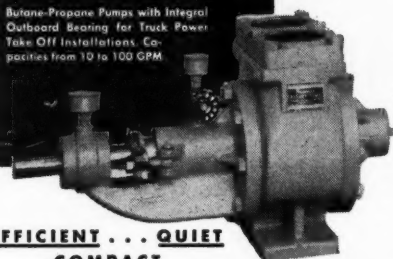
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APRIL - 1944

## HR-119 HARMAN TRUCK-TYPE PUMP

Butane-Propane Pumps with Integral  
Outboard Bearing for Truck Power  
Take Off Installations. Cap-  
acities from 10 to 100 GPM



**EFFICIENT . . . QUIET  
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**POSITIVE DISPLACEMENT . . . REVERSIBLE ROTATION . . . LOW  
FRICTION BEARINGS . . . NO CONTACTING METAL PARTS**

The Harman principle of pump design embodies a single rotor on a shaft rotating off-center in the cylinder. Since 1931, Harman Rotary Pumps have been giving dependable year-in and year-out operating efficiency in the handling of liquified petroleum gases.

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*Complete Dispensing Systems*



**FACTORY SALES AND SERVICE  
FOR  
ROADMASTER BUTANE CARBURETION  
Roadmaster Sales Corp.**

*of Texas*

317 So. Pearl Street

Dallas, Texas

well as the standard model, but will require more careful maintenance and cannot be expected to resist corrosion or stand up as long as the standard type. When standard equipment is once more obtainable, the "EAS" approval will be withdrawn. "EAS" extinguishers now available include pump tank and foam types. Many of these are going to priority holders, but some are being released to the general public.

Both labels are intended as indications to insurance inspectors of the degree of protection the equipment affords an occupancy. They serve as comparable indications of reliability to the owner or prospective purchaser of fire fighting equipment.



The Florence Stove Co. shell plant at Kankakee, Ill., gets Army-Navy "E" award. Rear Admiral Willard A. Kitts, who presented the award, is pictured congratulating W. L. Cooper, vice president, who received it for the Florence Stove Co. Between them is R. L. Fowler, president. At the left and slightly behind the Admiral is Eugene Holland, vice president.

**BUTANE-PROPANE News**





5000 GALLON CAPACITY L.P.G. TANK BUILT FOR

**THE ENGLISH BUTANE CORP., TUCSON, ARIZONA**



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## THOMAS Cylinder Truck Saves Men, Time and Lawns

- ALSO FOR STOVES, BOXES, CRATES
- PNEUMATIC RUBBER TIRES AVAILABLE NOW

An all purpose, one man truck for moving both cylinders and appliances. No more back-breaking lifting, either. Tapered body gives operator ample room between handles. Cradle construction accommodates any size cylinder up to 100 pound capacity. Wide Bottom flanges give support for appliances. Web strap (optional) holds appliance rigidly. Rounded handle grips permit skidding from end of delivery truck. Time saving, labor saving, cost cutting. Available now.

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APRIL-1944

## Get Acquainted with CENTURY

### *Manufacturers of:*

- Butane-Propane carburetors and heat exchangers.
- Combination butane-gasoline carburetors.
- Units for trucks, tractors, oilfield and other stationary equipment.

## CENTURY GAS EQUIPMENT CO.

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## SPRAGUE METER COMPANY

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## Tank-Truck Tractors Granted Priority

At the request of the office of defense transportation, WPB has granted a temporary priority on all tank-truck tractor applications that are approved by the ODT.

Under the new procedure, ODT officials said, all tank-truck tractor applications approved during the current petroleum transportation emergency will be handled by the truck manufacturers ahead of other truck applications.

Joseph B. Eastman, director of ODT, said the action was in accordance with the previously announced policy of doing everything possible to speed up the movement of petroleum products to the armed forces, the east coast and elsewhere.

"We are fully aware that other types of truck operators are in dire need of new equipment, and we hope that the increased allocation during 1944 will enable many of them to replace their present units. However, it must be borne in mind that unless the country's tank trucks continue to operate, other trucks, airplanes, and industries dependent upon them will not be able to function."

## "Dri-Gas" Dealer Navy Honor Man

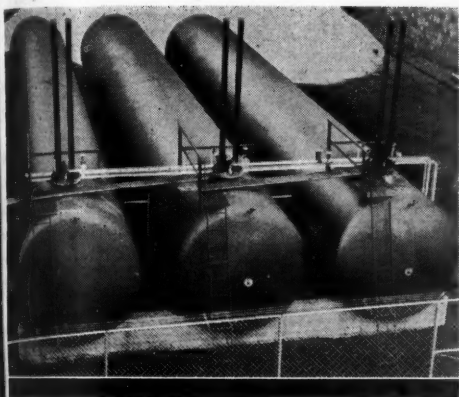
John W. Cox, Knox, Ind., dealer of the Illinois Bottled Gas Co., has been selected as Honor Man of his company during graduation from recruit training at the U. S. Navy Training Station, Great Lakes, Ill.

Before entering the Navy in December, Mr. Cox was Dri-Gas dealer in the Knox, Ind., area, while carrying mail as a part time occupation. During his absence Mrs. Cox is carrying on the Dri-Gas business with the help of a competent service man.

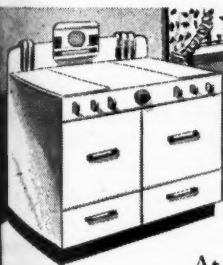
BUTANE-PROPANE Ne

# L-P GAS — TANKS

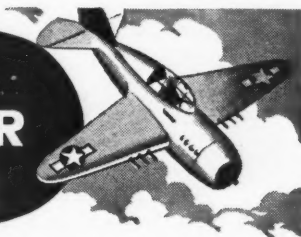
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WELDED and RIVETED PRODUCTS



The users of L-P gas (Butane and Propane) are continually growing both for domestic and industrial uses, and DOWNINGTOWN is keeping constantly in stride with this growth. It is important that the fabricator of tanks for L-P gases has special knowledge of the problems involved . . . for not only does safety depend upon his specifications for materials and choice of procedure in handling them, but extensive experience can be a time-saving . . . money-saving asset. You can depend on the facts from DOWNINGTOWN.



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PEACE**



At home and on the industrial front, a dependable source of Butane and Propane means more satisfied customers. For more than fifty years, through wars and in peace times, Carter has faithfully served. Write our Marketing Department for higher quality Butane and Propane.

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**ARKANSAS FOUNDRY CO.**  
IRON & STEEL

Manufacturers of ASME U-69  
Underground Storage Tanks  
for Butane

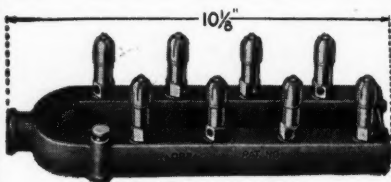
**Arkansas Foundry Company**

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No. C. L.-80 Barber Burner

**BARBER APPLIANCE BURNERS**

We are mainly on war production, but wherever permitted, we are supplying our regular products. Barber Units, in many standard or special shapes and sizes, are always correctly designed to fit the individual appliance, and give complete combustion on Butane-Propane or any other gas. Be ready for big post-war business—submit your special burner problems NOW to Barber engineers. Complete catalog on request.

**THE BARBER GAS BURNER CO.**

3704 Superior Ave.

Cleveland, Ohio

**Direction Covering L-79  
Will Aid AA-3 Rating Holders**

The following direction was issued March 7 pursuant to Limitation Order L-79:

This direction serves to assist holders of AA-3 ratings, such as the National Housing Agency, in obtaining plumbing, heating and cooking equipment under orders rated AA-3 and placed before Jan. 15, 1944.

As amended Jan. 15, 1944, Limitation Order L-79 provides for the up-rating to AA-3 of certain orders placed before that date. All orders bearing a preference rating of AA-3 which were placed prior to Jan. 15, 1944, shall, however, maintain their priority over orders so up-rated under Limitation Order L-79. The provisions contained in Priorities Regulation 12 relative to the effective date of re-rating are modified to the extent necessary to give effect to this direction.

**Underwriters' Laboratories Is  
Celebrating 50th Year**

Its first 50 years of service in testing all manner of equipment and establishing safety standards in industry are being celebrated in 1944 by Underwriters' Laboratories, Inc., of Chicago.

Sponsored by the National Board of Fire Underwriters, but now operating on a self-sustaining basis through fees charged for tests made for product manufacturers, this non-profit organization has exerted a large influence in promoting safe practices and preventing fires and accidents through exhaustive research and test methods.

Today 175 published standards exist, plus additional tentative requirements, each covering a classification of products. Products totaling 375,000 have been approved by the Lab-

oratories. Half a billion of these safeguarded articles are manufactured in a normal year. A corps of technically trained men constitutes the inspection service, operating from 185 centers of production in the United States and possessions, Canada and England.

The liquefied petroleum gas industry is familiar with Underwriters' Laboratories principally because of its work done in connection with the propagation of flame in gas-air mixtures and the safeguarding of gas fuel consuming and control equipment.

### Essential Activities List Many LP-Gas Jobs

A revised list of essential activities was released on Feb. 25 by the War Manpower Commission. All changes up to and including Jan. 15 are included. Announcement of changes has been made from time to time but this is the first complete list published since December, 1942.

The list serves as a general guide upon which manpower programs for allocating labor to the different needs are based. Among the classifications of interest to LP-Gas men are the following:

No. 17. Production of Chemicals and Allied Products. (Industrial organic chemicals; compressed and liquefied gasses; gaseous hydrocarbons; elemental and non-hydrocarbon gases.)

No. 23. Production of Petroleum, Natural Gas and Petroleum and Coal Products. (Drilling; rig building; maintenance service operations; petroleum refining; production of tar and pitch, coal gas, coke, and liquefied petroleum gas.)

No. 30. Heating, Power, Water Supply and Illuminating Services. (Electric light and power, water and gas utilities; steam heating services; water



## How To Get The Most Work Out Of Your VIKING PUMPS

Your Viking Pump will give better service if you are careful not to turn packing gland nuts up too tightly. Too much pressure will cause packing to bind on the pump shaft, causing the bearings to run hot and throwing an overload on the motor or engine.

Because pumps are hard to get it pays to take good care of the ones you have. The Viking Service Manual tells you how. It gives you clear, practical help in mounting, operating and maintaining Viking Rotary Pumps. Write today for your copy of the Viking Service Manual. IT'S FREE and will be sent to you by return mail.



**VIKING PUMP  
COMPANY**  
CEDAR FALLS, IOWA

APRIL-1944

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PROPANE or  
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**EXCHANGE**

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**REGO**  
LP GAS EQUIPMENT

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BUTANE-PROPANE CYLINDERS

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2620 South Ervay Street, Dallas, Texas  
**GAS EQUIPMENT SUPPLY CO.**

well drilling; installation and servicing of liquefied petroleum gas facilities.)

A complete copy of this release may be had from the Office of War Information, Washington, D. C. It is designated as No. WMC-2036-7; P. M. 4526, dated Feb. 25.

**AGA Reorganizes To Set Up  
Special Gas Departments**

Putting into effect the organizational changes in the American Gas Association recently voted by the Association's membership, the Executive Board at a meeting in Cleveland, Feb. 16, approved detailed plans for setting up a Natural Gas Department and a Manufactured Gas Department. These plans call for extensive changes in the Association's structure and for reorganization of various committees. Their purpose is to increase the usefulness of the Association to all its members and to enlarge its opportunity to be of service to the industry.

As now constituted, the Constitution provides for a Natural Gas Department and a Manufactured Gas Department, each with a vice-president of the Association as chairman. J. French Robinson, vice-president of the Association and president of The East Ohio Gas Co., is chairman of the new Natural Gas Department. George S. Hawley, president, The Bridgeport Gas Light Co., and past president of the association, is chairman of the Manufactured Gas Department.

The first meeting of the Natural Gas Department will be a "Spring Conference" at French Lick Springs hotel, French Lick, Ind., May 11-13, inclusive.

The program has not yet been completed but it is expected that it will include a symposium on the storage of natural gas and one on long distance transmission of natural gas.



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## W. M. Foster Buys Out Raymond Ford, Marshall, Texas

W. M. Foster, Marshall, Texas, operator of a butane gas service for the last five years, bought out just before January the entire butane service formerly operated by Raymond Ford.

Mr. Foster now serves a total of 600 gas customers in the Marshall area, including a number of industrial users, such as sawmills, cotton gins and oil drilling rigs.

The transfer of ownership included trucking equipment and distribution offices in various business houses.

All engines of the company's truck fleet have been converted from gasoline to burn butane.

In addition to Mr. Foster, the company personnel includes Kelly Swim, Sam Lusk, Albert Hillin and Jack Chambliss.

## Jos. B. Eastman, ODT Director, Passes Away in Washington

Joseph B. Eastman, director of defense transportation and one of the nation's foremost authorities in the transport field, died March 15 in Washington, D.C., after a month's illness.

Mr. Eastman had been a member of the Interstate Commerce Commission for 25 years.

Brigadier General Chas. D. Young, now deputy director of ODT, will be in charge of the office pending a permanent appointment.

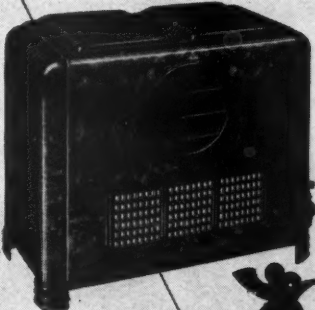
## WEP Products Stream Flows Through 20-in.

The head of the stream of products pumped through the War Emergency Pipelines, Inc., 20-in. line was at a point 25 miles west of Station 24, near Marietta, Pa., within 160 miles of the Linden, N.J., terminus at 7

# Bu-Pro-Fire

## Gas Heaters

A GOOD NAME TO REMEMBER FOR GREATER HEATING EFFICIENCY WITH LIQUEFIED PETROLEUM GASES.



DESIGNED ESPECIALLY FOR L. P. GASES

**S** TENNESSEE ENAMEL MFG. CO.  
NASHVILLE 9, TENNESSEE



## L.C. RONEY, INC.

meets the demands of the nation. Our plant has gone to war for the duration—but when peace comes, L. C. RONEY products for the LP-Gas industry will meet the demands of dealers everywhere. In the meantime—our stock of LP-Gas equipment is still complete.

**L.C. RONEY, INC.**  
1740-44 W 59<sup>th</sup> ST. • LOS ANGELES, CALIF.

## Superior FLARE FITTINGS

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### L. P. G. INSTALLATIONS

SAE (Flare) Unions,  
Couplings, Adapt-  
ers, Elbows, Tees,  
Crosses and Nuts

Listed as Standard by  
**UNDERWRITERS  
LABORATORIES,  
INC.**



WRITE FOR BULLETIN

**SUPERIOR VALVE & FITTINGS CO.**  
1509 WEST LIBERTY AVENUE  
PITTSBURGH • PENNSYLVANIA

a.m., Feb. 28. The process of filling the line was started the second week in March. Progress of the stream was delayed by difficulties in mountainous areas of Pennsylvania.

Preparations have been made at Beaumont, Texas, for starting shipment of 80-octane gasoline through the 20-in. line. It is believed that the all-purpose military gasoline will move in 200,000-bbl. slugs.

### What the Big-Inch Carries

The WEP 24-in. crude-oil line has delivered an average of considerably more than 300,000 bbl. daily. Shipments most of the time have been in the 310,000 to 315,000 bbl. daily range.

### New Divisional Managers For Detroit-Michigan Stove Co.

John C. Pankow, director of sales for Detroit-Michigan Stove Co., has just announced the appointment of divisional sales managers for the Southeastern Division and Northwestern Division.

E. F. Hamilton will supervise sales of Detroit Jewel and Garland domestic gas ranges and Garland commercial cooking equipment in the southeastern states, with headquarters in Atlanta.

Ray M. Houdek will serve in a similar capacity in the northwestern states, operating from Kansas City. Both men have been associated with the company for several years as sales representatives in these areas.

### Carter Acquires Northwest Properties

The Carter Oil Co. is further expanding its operations in the Rocky Mountain area as a result of agreements whereby it is acquiring the

refineries, certain producing leases, and marketing facilities.

The refineries include two plants of the Yale Oil Corp. and the Consumers Oil and Refining Co.'s plant at Newcastle, Wyo. The Yale refineries are located at Billings, Mont., and Lovell, Wyo.

Also included are marketing outlets of these companies, situated in Montana, North Dakota, South Dakota, Idaho, Wyoming and Nebraska. The producing properties are located in the Elk Basin field, in Wyoming, with a present yield approximating some 900 barrels a day of flowing production.

#### Will Form Northwest Division

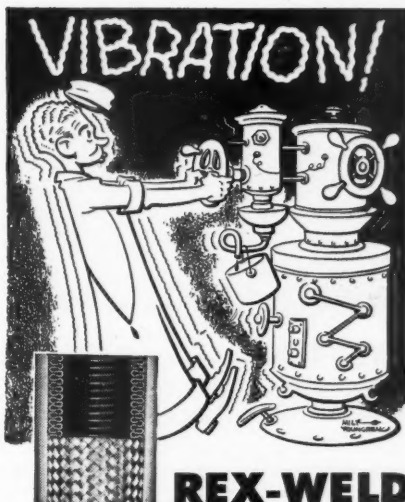
The newly acquired holdings will form a part of Carter's Northwest Division operations, under supervision of Ralph E. Damp, and will enhance considerably the company's refining and marketing program.

Last November, Carter purchased the Minnelusa Oil Corp., which owned substantial production in the Elk Basin field in northern Wyoming and the Lance Creek field in eastern Wyoming. The Carter organization is also engaged in the producing and refining of petroleum in the Cut Bank area in northern Montana, operating the properties formerly identified as the Santa Rita Oil and Gas Co. and the Northwest Refining Co.

#### LP-Gas Is Excepted From Priorities Regulation 13

Priorities Regulation No. 13, which gives rules controlling special sales of idle and excess materials, will hereafter include finished products as well as industrial materials, according to a March 1 release.

One of three exceptions to this coverage is "Petroleum and petroleum products, including natural and liquefied petroleum gases."



#### Flexible Metal Hose CONTROLS IT

Chicago Metal Hose Corp.'s REX-WELD is highly resistant to fatigue even when subjected to constant vibration over long periods of time. It is extremely flexible and remains airtight and leakproof after years of hard usage. It stands up under high temperature and prolonged flexing. REX-WELD is fabricated from strip metal and is precision autogenous welded to form a weld stronger than the tube itself. Write, giving complete information and we will be glad to furnish engineering recommendations for any design problem.

Flexible Metal Hose for Every Industrial Use



**CHICAGO METAL HOSE CORPORATION**  
MAYWOOD, ILLINOIS

Plants: Maywood and Elgin, Ill.



**ROBERTSHAW** Radio Programs  
are teaching range prospects the  
value of Robertshaw Oven Heat  
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**ROBERTSHAW  
THERMOSTAT CO.  
YOUNGWOOD, PENNA.**

## TANKS

*In the Pacific Northwest  
See*

**King Bros., Inc.**

**For Your Tank and  
Cylinder Requirements**

3500 S. E. 17th Ave., Portland, Ore.

**HOT Water**  
**UNITED STATES**

*Automatic Water Heaters*

Approved by A.G.A. for  
Liquefied Petroleum Gas

**United States Heater Co.**  
COMPTON, CALIFORNIA

## CLASSIFIED

Classified advertising is set in 6-point type, without border or display, at the rate of 10 cents per word per insertion; minimum charge per insertion \$2. Box numbers for replies count as 5 words. Count as a word each one letter word and each group of figures. Classified advertising is only accepted when payment accompanies order. Copy and payment must reach publisher's office prior to 10th of month preceding publication.

### HELP WANTED

**EMPLOYMENT OFFERED: PROPANE**  
Transport Truck driver. Over 38. Experience with bulk storage plant. References. Southern Indiana Liquefied Gas Company, 749 Main Street, Vevay, Indiana.

### SITUATION WANTED

**WEST COAST RANGE REPRESENTATIVE**  
Available Now. 20 years experience utilities and dealers in California, Arizona and New Mexico. Excellent record and references. Ray Jewell, 2227 East Villa Street, Pasadena, California.

### BUSINESS OPPORTUNITY—OFFERED

**FOR SALE—MY ENTIRE BUSINESS** consisting of one brick building 50 ft. x 100 ft.; two 1200 gallon transport trucks; one 3000 gallon transport truck; one 600 gallon transport truck which is equipped with a winch for service work; ten 1000 gallon skid tanks; thirty-five 150 gallon butane tanks; one new welding machine; \$10,000.00 accounts receivable; one million and a half gallons annual butane gas sales; \$3,000.00 worth of pipes, fittings, attic fans and stoves. \$150,000.00 annual sales. This business is located in Oklahoma where drilling is good and will not sell unless buyer agrees to operate here at same location. Going to the army. Box 204, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles 14, Calif.

**PROFITABLE BUTANE BUSINESS** in Texas. \$30,000. Well established. Servicing farms, ranches, gins and oil rigs. Plentiful supply of good Butane. Ill health forces retirement to country. Will consider part trade or all trade in pasture land and cattle in good cattle country anywhere. Write Box 204, BUTANE-PROPANE News, 1709 W. 8th Street, Los Angeles 14, Calif.

### BUSINESS OPPORTUNITIES WANTED

**INTERESTED IN PURCHASING PROPANE** bulk plant, either partially built, or complete

**BUTANE-PROPANE News**

## CLASSIFIED—Continued

in operation. Prefer Midwest location. State price, age, price and all particulars in first letter. Box 250, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles 14, Calif.

### EQUIPMENT WANTED

WANTED—BUTANE OR PROPANE STORAGE tank 125 to 200 lbs. working pressure, 17,500 gallon capacity. Will sell if storage is obtained or trade for storage 1524 gallon 125 lb. working pressure Columbian truck tank, pump, meter, K-5 1941 International. Uregas Service, Inc., Box 152, Moberly, Missouri.

WANTED—USED PROPANE CYLINDERS, regulators, cylinder valves, propane storage tanks, all sizes. Box 255, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles 14, Calif.

WANTED—A TRANSPORT SEMI-TRAILER for Propane. Box 190, BUTANE-PROPANE News, 1709 W. 8th St., Los Angeles 14, California.

### Synthetic Rubber Glossary Available in Printed Form

To meet unexpected demands for this glossary giving pronunciations and meanings of synthetic rubber words, Hycar Chemical Co., producer of butadiene-type synthetic rubber, has had this information printed as a 5½-in. by 8½-in., 8-page pamphlet.

#### Makes No Finished Products

Hycar Chemical Co. produces crude synthetic rubber in various grades and types, specializing in those which are highly resistant to petroleum products, heat and abrasion, for a wide variety of industrial applications. The company makes no finished rubber products, but furnishes the crude material to many leading rubber manufacturing companies, who in turn compound and process it into a multitude of products.

Copies of the booklet entitled "Chemical Names and Terms Frequently Encountered in the Synthetic Rubber Industry" may be obtained by writing the company at Akron, Ohio.

## National Butane Gas Co.

Memphis, Tennessee

### OUR THREEFOLD OBJECTIVE:

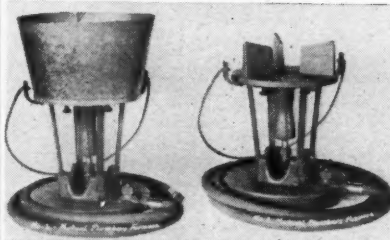
1st, VICTORY

2nd, SERVICE

Last, PROFIT

VICTORY, by building ONLY the equipment deemed essential by the WPB; SERVICE, by remaining in the Butane Gas Business ONLY; PROFIT, the greatest profit of all, The GOOD WILL of our customers.

### Mutual's Streamline Portable Plumbers Furnace No. 2-A



This unit is well constructed, efficient and economical. It may be used in the field or shop. It can be adapted to any type of L.P. Gas cylinder. The modern plumbers throughout the country are using this unit. Write for details.

### Mutual Liquid Gas Co.

3805 W. Imperial Hwy. Inglewood, Calif.

APRIL-1944

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